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ABSTRACT

The proceedings of the ninth annual meeting of the College Reading Association consisted of the following papers: (1) "President's Address" (R. C. Aukerman); (2) "Planning and Implementing a College Reading Program" (M. Schleich); (3) "Reinforcement Counseling with Small Groups in Modifying Study of College Students" (T. A. Ryan); (4) "An Experimental Investigation of the Effectiveness of a Brief Study Skills Program for Freshman College Chemistry Students" (E. K. Foxe); (5) "Preparation for Specialists in Teaching College Reading" (J. B. Wolfe); (6) "The College Role in Anti-Poverty Reading Programs" (J. F. Zubko); (7) "Structuring a Reading and Writing Skills Program" (M. D. McNeil); (8) "Measuring and Evaluating Effectiveness of College Reading Programs" (D. Fishco); (9) "What the Reading Tests Do Not Test" (C. Sailer); (10) "Reading Materials: Rationale and Review" (R. Karlin); (11) "Implications of Psycholinguistics for College Reading" (H. J. Vetter); (12) "Needs of Future Teachers of Reading" (N. B. Smith); (13) an abstract of "Preparing English Teachers to Teach Reading" (R. F. Kinder); (14) an abstract of "An Evaluation of the Morphologico-Algebraic Approach to Teaching Reading to Adult Functional Illiterates" (L. R. Hinds); (15) "Factors in the Home Background and Reader Self Concept Which Relate to Reading Achievement" (C. A. Ketcham); (16) an abstract of "Preparation for Teaching Reading in Special Education Classes" (B. B. Weiner); (17) "Preparing Elementary Teachers in Linguistics" (R. Weber); (18) "A Reading Program for Gifted College-Bound Students" (E. G. Griffin); (19) "Recent Research on Reading and the Comprehension of Time-Compressed Speech" (D. B. Orr); (20) "Management of Visual Problems among Poor Readers at College Level" (B. J. Lubin and R. Sinoway); (21) "Evaluating Professional Competency: The Anagnologist" (A. J. Mazarkiewicz); (22) "New Insights in Teacher Education Related to Elementary School Learning" (J. Veatch); and (23) "The Place of Speed Reading in High School and College Reading Programs" (I. Baker). (MS)

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*Proceedings*

*of*

# COLLEGE READING ASSOCIATION

*Edited*

*by*

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COLLEGE READING ASSOCIATION

# PREFACE

The College Reading Association held its ninth annual meeting at Jersey City State College, Jersey City, N. J. on April 1-2, 1966. At a business meeting, the following were announced to serve as officers for the coming year.

| | |
|---|---|
| Leonard S. Braam | President |
| William Cooper | President-elect |

Tenth Annual Meeting
College Reading Association
March 17-18, 1967
Bowling Green University
Bowling Green, Ohio

# PRESIDENT'S ADDRESS

Robert C. Aukerman
*University of Rhode Island*

A late spring storm sweeps out of the Rockies, with resultant blizzard conditions across the plains states . . . Thousands of cattle and sheep are marooned . . . 46 people die . . . An earthquake levels an entire region where homes and stores stood moments before . . . 100 die . . . The Mississippi and Missouri crest their levees, covering miles and miles of bottom land with raging, swirling death to cattle and man alike. A raging tropical wind whips up the ocean and throws it bodily across a thousand-mile-long stretch of beach and hinterland . . . A hurricane has hit.

Our President responds by declaring "A disaster area . . . a state of emergency." Forces are marshalled to alleviate suffering; to prevent looting; to bring order out of chaos.

I am, similarly, declaring a state of emergency in reading and am designating the following disaster areas:

1. Linguistics.

Now with practically no effort, we can collect a good number of studies by linguistic scientists which contribute substantially to our basic knowledge of language and reading. These are valuable resources for our work in reading and for these studies we are most appreciative.

It is quite another thing, however, when linguistic scientists metamorphose into reading specialists, with such resulting monstrosities of educational garbage as the following:

cat - rat
a cat - a rat
at - cat - rat - pat
pat a cat - pat a rat
rat - pat - fat
a fat cat - a fat rat
pat a fat cat - pat a fat rat
pat - rat - bat - cat
pat a rat - bat a rat
bat a fat rat - bat a fat cat
a cat at bat - a rat at bat
bat at a rat - bat at a cat
a cat bat at a fat rat
a fat cat bat a fat rat

Here is the SRA version of the "fat-cat":

"Dan had a cap.
Dan had a tan cap.
Dan sat.
Dan had a nap.
Tap! Tap! Tap!
A fat cat ran.
A fat cat ran to the cap.
The fat cat had the tan cap.
San Dan!"

This is disaster! And here's the reason: I have yet to meet a person who is a bona fide linguistic scientist who also admits knowing anything about teaching reading to young children in a classroom . . . or for that matter about the development and growth of young children.

To illustrate their naivete, I offer two quotes from one very famous linguistic scientist who has metamorphosed into one of these reading specialists. Consider this gem, for example:

> Both reading and talking have the same sets of language signals for language reception . . . For talking, the child of four . . . has developed through more than 5000 hours of practice . . . For reading . . . from one-tenth to one-fifth as many hours of practice are needed . . .
>
> Building up this new skill (reading) does not require any more intelligence on the part of the pupil than that necessary for him to learn to talk.

The linguistics-author continues with his mal-simplification to the effect that, if practice is arranged in small, sequential steps (like the bat, fat rat, cat sequence)—each of which is thoroughly learned—learning to read is no problem, for one is just adding it to the already-learned language skill of talking . . . and "should not give rise to any confusion or frustration." Obviously this "Nova-reading specialist" is ignoring the whole area of psychology of human learning, in which a great deal of substantive research indicates the problems involved in whole-part learning, visual gestalts and their relationship to reading, visual perception, and, most significantly, individual differences, in addition to the whole area of structural analysis. The linguistics-reading specialists seems to be putting all their eggs into the linguistics "look-say" basket.

It is my contention, therefore, that letting these linguistics experts loose in the field of reading is leading to disaster.

Their suggestion that reading can and should be taught by small bits of added information leads to the suggestion of the next disaster area:

## 2. Programmed reading.

An emergency exists here which most certainly will result in one of the educational disasters of our generation . . . namely the bit-by-bit feeding of children through programmed workbooks and machines. This corruption of Omar Moore's basic research at Yale in autotelic responses in what he calls the "responsive environments" and the somewhat comparable research by Skinner at Harvard on programmed learning has led to the acceptance of programmed reading materials without as much as one article of protest from the profession. Why is this? Is it the aura that surrounds the name of Harvard and Yale? I think not.

Is it the fact that the children at Hampten school in Connecticut actually do learn to read by this method . . . or that the Skinner pigeons do learn patterns of response and the teaching machines and programmed workbooks do foster learning? No, I think it is because of a lethargy which has crept over the profession in the last two decades. A lethargy which says, "Oh well, so what . . . let's try anything."

Skinner has never laid claim to the title of Reading Specialist. His work in psychology of learning is of fundamental importance to all of us who work in the area of reading, which, indeed, is the common denominator of learning in the content fields. Similarly, Omar Moore is not a reading specialist and is not brash enough to claim to be one. He set out to prove a basic assumption in the field of sociology — namely that a responsive environment produces far richer results than an environment which produces the stimulus. He switched the S--R sequence. When originally conceived, in the Thorndike and Pavlov school of psychology, the S came from the outside environment and the R came from the learner. In Moore's research, the opposite takes place: the child (learner) produces the stimulus and the environment responds. Reading is the medium, assisted by expensive programmed electronic devices and human responders in a clinical one-to-one relationship.

Now, here is what has happened: opportunists have appropriated part of the idea and, capitalizing upon the notoriety which has attended 3-year-olds with electric typewriters and pecking pigeons, these nova-reading specialists have begun to flood the market with all sorts of unidentified flying objects in reading.

Every new monthly issue of **Grade Teacher** and **Instructor** should alert us to this invasion of flying saucers from outer space. And, don't be lulled by the UFO public relations men. These objects are not swamp gases. They are actual devices . . . with blinking lights . . . manned by little men with $$$ signs blinking in their eyes!

Aided by millions of dollars for "Operation Head Start", Title I for the Disadvantaged, Title III of the "Easy Act" and Title III of XI of NDEA (the Institutes) . . . these new unproved, un-research gimmicks and gadgets are threatening to skim off the reading $$$ and, at the same time, leave reading in utter chaos.

My dear colleagues . . . I tell you, this is an emergency! Our profession is being taken over by the machinists and the bookies! This is disaster!

3. Private Project Proposers.

A third "disaster area" is private project proposers of federally-supported programs involving reading.

The noble, well-meaning concern of the Congress for the upgrading of teachers and materials — with the hopeful improvement in learning as a resultant — is being corrupted by these private project proposers of federally-supported programs involving reading.

Millions of our tax dollars are being spent on educational WPA type projects. We, as taxpayers, should be greatly concerned about the urgency which attends the spending of the millions. The Congress provided that the money be spent before a certain date . . . August 31, I think it is this year, rather than saying the money may be spent when, and if, valid-and-worthy projects are forthcoming.

In the haste of getting this money and earmarking it before deadlines, an unbelievable number of unbelievable projects have been funded. Innovative, to be sure. But, like the WPA (which also was innovative in that it paid people for watching others work) millions of dollars are going down the educational drain . . . We should be concerned!

BUT in addition to being concerned, we, in reading, should be **alarmed** because a good percentage, more than half of these projects (perhaps as many as three-fourths in some states) are in the field of reading!

This is turning out to be a **disaster** to our profession. Here is why: Public and parochial schools are so critically understaffed in trained reading personnel right now that they are turning over the task of writing proposals to outside proposal-writing firms which are mushrooming. They are threatening to take over from such bona-fide professional associations as New England School Development Council.

Some of these outfits have package deals which they peddle around from community to community. They call themselves "Educational Consultants." For several thousand dollars they will oblige a community with one of their pre-packaged "innovative" projects, and you can bet it will be in reading! Why does this happen? Because the local school systems are harrassed on three sides (1) the politicians who are most desirous that their constituent schools get their share of the monies, (2) the teachers who are asking, "Why can't we get some of these funds for supplies?" and (3) the parents, who ask "Why can't our children benefit from all this Federal money?" But there is no manpower even to initiate such projects.

Certainly the superintendents and their administrative staffs are already overburdened. Principals, also, cannot do this. Reading specialists cannot be shunted from classroom or clinic to spend time writing proposals. Consequently, the professional proposal writer comes as a gift from heaven and his charges are viewed as "seed money" and seem quite reasonable in view of the possible bonanza that may flow homeward from Washington as a result of his work. After all, there is no one else to do the job.

What qualifications do we, as a profession, demand that these "Private Project Proposers" have in order to pose as "educational consultants in reading?" None!! And what happens? **Disaster** to our profession!

Here are two cases to illustrate the point:

A proposal came into a school system to test 200 tenth graders for $4,750.00. This came from a private project proposer not connected at all with the field of reading. What test did this person use —the same one that he used at the Adult Correctional Institution in testing adults. It seems to be the only test he knows about. Then what did he propose to use after he tested these tenth graders—he proposed to use the same machine program for all these boys and girls that he had used with the adults in the adult prison, even though some of these boys may be potential school dropouts. In the proposal this private project proposer, you see, had built himself into the project as the main actor.

A Private Project Proposer in reading (one who has never had a course in reading) provided a harried superintendent last week with a project in which he built himself into the project as a sub-contractor to come in to train the teachers in the use of one company's equipment. For this "professional" service he allowed himself $6,000 for the twelve week training program consisting of one session per week . . . or a total of $500 per session . . . which divides down to $200 per hour!

Did the superintendent object? Of course not . . . it isn't HIS money (or is it?) Did the reading consultant in the State Department of Education object? (You bet he did!) But what happened? The superintendent came rushing to the State Department of Education pleading for this outrageous amount on the basis that he (the superintendent) had already made a commitment to this "Private Reading

Project Proposer" to build him into the project if it is approved; therefore the superintendent insisted, the project, with this fellow's services built into it, just **had** to be approved; otherwise Mr. Supt. would be over the barrel for a verbal agreement which he couldn't keep . . . and should never had made. This is disaster to our Profession!

The superintendent completely ignored the facts — even when pointed out to him that:

(1) This individual was **not** a reading specialist.

(2) Reading proposals should emerge from the needs and through the efforts of the faculty and administrative staff and the community agencies involved, not from outsiders.

(3) The amount of honorarium per hour for this so-called "expert" was four times that paid by the U. S. Office of Education for a **whole day's work** by recognized reading experts.

(4) The service he was offering is available **free** from authorized sales representatives for the company, and does not take a series of twelve training sessions.

(5) Most important is the fact that what this Private Reading Project Proposer was proposing is **highly illegal**; namely that, as one of the participants in the preparation of the project, he was selling his own services as an outsider, thus creating a conflict of interest, which is a flagrant violation of Federal law.

4. Reading in the Kindergarten.

Because Dolores Dirkin found some children who could read, on a one-to-one basis before they entered school; and because Omar Moore has demonstrated, also on a one-to-one basis, that 4-year-olds can learn to read with his "responsive environments" techniques, and because some Montessori schools have been responding to what the AMS former president, Nancy McCormick Rambush, calls "Pushy Parents" and are preparing a Montessori environment for reading—or, at least, Reading Readiness—all these "innovations" have captured the imagination of feature-article writers for periodicals and newspapers. Scores of feature articles with pictures have been produced. The result: Disaster!

Why? Because the cult of "We Must Teach Reading in the Kindergarten" is spreading like wildfire, especially by those who know least about four things: 1) the philosophy of the Kindergarten; 2) kindergarten-age children—their growth and developmental characteristics; 3) psychology of individual differences, 4) and last READING.

The extent to which this disaster has gone, of course, is the publicity given to Glen Doman's "exposure method" of **Teaching Your Baby to Read**.

Now, what is the end result of this push for reading in the Kindergarten? Just this:

Kindergarten teachers who usually **know nothing** about reading and are being panicked into reading are worrying themselves about:

initial consonant sounds
initial vowel sounds
morphemes
phonemes
phonics
phonetics
Phonovisual charts
Phonics-We-Use
Phonics-in-Action
Words-in-Color
i/t/a
linguistics
Phonetic Keys to Reading
NDEA
ESEA
BTSB
EDL
SRA
GCMP

This latter has grown out of the push for reading in the Kindergarten—it is the Greater Cleveland **Math** Program, which (together with its imitators) is including the teaching of NEW Mathematics in the Kindergarten with its own jargonese:

sets
equivalent sets
non-equivalent sets
union of sets
cardinal numbers
number sequence
numerals
separation of sets
ordinal numbers
properties of sets
addends

and, not satisfied with all this, they have sub-sets.

And just Wednesday morning of this week, the TODAY TV program featured another Greater Cleveland brainstorm: the NEW ECONOMICS in the Kindergarten!

You see the sequence: "Let's learn more, faster and sooner." Result: Reading in the Kindergarten leads to New Methematics in the Kindergarten leads to New Economics in the Kindergarten.

I'm warning you people, these kindergarten teachers are going to put us out of business!

But, as members of the College Reading Association, let's look at the facts: What does this do to your undergraduate program of preparing elementary teachers? What does it do to your graduate program for preparation in reading? What does it do to the Nursery school philosophy? What does it do to the Kindergarten philosophy? Do we want to support this disaster, (not only to our profession but to the children themselves) of teaching reading in the kindergarten?

5. Lack of State Certification in the field of Reading.

This is, without doubt, the most critical area of our profession today. The last issue of our **Journal of the Reading Specialist** carries a long exposition which I have written on this subject. It should suffice, therefore, for me to indicate the urgency of the situation with one example from my own state, Rhode Island, and what is happening in Rhode Island can happen to YOU, except more so, because you are all bigger than we are.

At the beginning of school last September, there were 50 people in Rhode Island schools who were classified as having some sort of function as reading teachers. Many of those people were not qualified, and have done nothing within this academic year to improve their status. They don't have to, because we do not have certification for reading teachers YET. BUT, here is the fact that should alarm us: Since January of 1966—in these past **three** months, 86 new people have been transferred from classroom teaching jobs to work in federally-supported programs involving reading, and some of these people are even directing the programs. Of those 86 new "reading personnel," only 4 are qualified through training to be classified as reading teachers, none as reading specialists!

What will this do to our college and university training programs in reading? Obviously, if these 50 people who were in, plus the 86 new ones, are all allowed to run reading programs without any training and in the absence of certification requirements, what need is there for a graduate training program in reading?

Similarly, if these people are being slipped into these positions now by superintendents who wink at the need for trained personnel in order to latch onto the millions of $$$$ in federally supported projects in reading, we can anticipate the support those same superintendents will give to the idea that, if certification requirements should be passed, these people should be certified **ex post facto** through a Grandfather Clause.

At the present rate at which federal projects are mushrooming, the need for reading personnel, and the present rate at which that need is being filled from the ranks, we in Rhode Island can anticipate that in two more years, we won't need to train any reading specialists. All the jobs will be filled with "Instant Reading Specialists."

In Rhode Island, in three months, there has been an increase of 172% which adds up to 688% increase over a twelve months period. And we are just starting with Title I and Title III reading projects. Indeed, in Rhode Island less than half of the available money has been allocated. Assuming the same rate of creation of Instant Reading Specialists, the increase for the year could be 1376%.

## Conclusion

I am sure that my conclusions are obvious. We are in a critical era in the development of our reading profession. Indeed, I believe we have tarried two years too long. Our profession is being eroded by a flood of dollars from Washington. Our profession is being taken over by outsiders, who are being welcomed with open arms by our school administrators and these newcomers can buy professional respectability by joining our professional organizations and associations. Our profession is being turned into a side-show by patent medicine peddlers, carnival barkers, machinists, and bookies. Finally, our profession is being scuttled by school administrators.

We, in the College Reading Association, constitute a professional nation-wide group in the field of reading. It is upon us, therefore, to move decisively and with great speed to save our profession and those in it.

1. We need to be concerned with the well-trained reading teacher who has spent thousands of dollars and scores of weeks in his life and we need to protect that person against the invasion of these Instant Reading Specialists. This is of prime importance to members of the College Reading Association.
2. We need to be concerned with the kindergarten readiness program of enjoyment of good books, the unfolding of interests, the blooming of personality, the joy of living and experiencing must be protected against mavericks. We in the College Reading Association must be concerned that this be done.
3. We must be concerned with the good private reading clinician who has spent tens of thousands of dollars developing his skills in diagnosis and treatment and who has built up a clientele. We must take steps to protect him against quacks.
4. We must be concerned with the elementary school child who looks to books and learning to read as an adventure in excitement. We must protect him against the "fat-cat" type of sounds which are being played from the new Linguistics Band Wagon.

5. We must be concerned with the professional linguist and he must be protected from his own people who are selling their wares to a linguistics hungry publishing world.

6. We must be concerned with the reliable producer of kits, boxes and new machines as adjuncts to reading and not give our whole-hearted support to all sorts of new products which have been dumped on the market by imitators and opportunists anxious for the millions of dollars of federal money.

7. We must be concerned with the welfare of the U. S. Office of Education and the worthy projects which come to it; we must aid schools to develop valid projects; we must discourage the acceptance by State Departments of Education and the U.S.O.E. of those projects which seem to violate federal law, where there is conflict of interest and especially where these projects phase in deals for private project proposers.

8. Finally we must build some sort of professional safeguard so that those who have developed skills and the know-how in the field of reading will not find themselves being undercut and displaced in the end by people who have had no training but are able to become titled as Reading Specialists and Consultants.

These concerns of the members of the College Reading Association are things which each one of us can do something about. This is not just a problem for the College Reading Association itself; it is an individual problem which each member can work on at home.

Too many times we hear from prophets of doom that this, and this, and this is going to happen but no suggestions are made as to what **you**, as an individual, can do to prevent it from happening. Here, however, are some specific things which you can do: You can go to your State Department of Education; you can go to your reliable school superintendents: and you can indicate the disaster which is impending in these various areas to which I have pointed your attention today. You can make yourself available to superintendents, to state departments of education as well-trained people and you can help write projects which will be worthy of the federal millions which are available for them. In other words, this can be a real personal contribution of yours to our profession in these critical days where we are faced with an emergency and the impending disaster which accompanies it.

The challenge is yours. I hope that you will accept it as you return to your homes from this Conference.

# PLANNING AND IMPLEMENTING A COLLEGE READING PROGRAM

Miriam Schleich
*Hofstra University*

## The Need for College Reading Programs

Hundreds of colleges and universities in the United States already have reading improvement programs of various kinds. Indeed a 1959 survey reported by Dr. Lyle L. Miller[1] indicated that colleges in all but three states had such programs.

Those of us who have been involved with reading improvement courses over the years are thoroughly convinced also that they will continue to be needed in the future. If advanced education is to be made available not just to the upper 10% of our high school graduates but to 25% or even up to 40%, then indeed effective developmental reading programs will continue even in our most selective universities. For here, as the quality of the student body increases, so do the demands and expectations of the faculty increase. Theoretically, as well as practically, reading improvement courses will always be needed since learning to read requires the continuous development of mature skills and techniques and understandings beyund those mastered in the elementary and secondary schools. The poet Goethe understood this when he said, "The dear people do not know how long it takes to learn to read. I have been at it all my life and I cannot yet say that I have reached the goal."[2] Goethe was 80 when he made this comment.

## Planning a College Reading Program

What are some of the steps that are necessary at the planning stages of a college reading program to insure success? Perhaps the first essential ingredient in both planning and implementing is the willingness on the part of the faculty member initiating the program to assume the role not only of teacher but also of missionary. The individual who initiates a college reading program must be willing and able to sell the program to his administration, his colleagues, and the student body. He must understand thoroughly the theoretical justification for a college reading course, and, in addition, the practical justification for it in his particular college or university. He must continuously be on the offensive, not defensive, selling his colleagues on the importance of a reading course for them as well as for the students. Many college teachers are unable to do the job they would like to do not because their students do not have the capacity to handle the work but because they do not have the reading skills and understandings which must be developed at each higher successive level, and from the standpoint of the student, the acquisition of the skills of learning is just as important as the content thereof. For him, increased skill and power to learn will be needed and useful long after specific content has been forgotten.

In planning a college reading program, therefore, your first step is to make sure that you have the understanding support of your administration and, insofar as possible, the understanding and support of your colleagues. The writer found it helpful in the initial stages of setting up a reading program to use the faculty dining room as a forum for discussion. By sitting at different tables and talking with various groups of faculty during lunch hour, it was possible to get a feeling for the attitudes of various faculty members, to interpret for them the need for the program, to ask for their suggestions, and to enlist their support. Many times erroneous notions and false concepts of the reading program were corrected and faculty who had started out somewhat hostile to the idea of a reading program became interested in its possibilities.

In planning a reading program one might also find it helpful to work with the College Testing Bureau, the Dean's Office, and the Audio-Visual Aids Department in the early stages of planning. It is important to know the range of your student body, what their S.A.T. scores are, or what their scores are on any other measuring devices your college or university may use. In addition, if you plan to use any visuals, diagnostic equipment, or any training instruments, it is essential to work with your A.V.A. personnel, since there is nothing more devastating to a reading program than instruments that won't work, or work poorly.

A major consideration, also, in planning your college reading program is to have clearly in mind your major objective, to decide what the major emphasis of your course shall be. In discussing the objectives of college reading courses Dr. Albert J. Kingston,[3] a veteran administrator of college reading programs, points out that reading programs initiated just after World War II tended to pattern themselves after courses established by the armed forces, and that in these programs tachistoscopes, reading pacers, and other mechanical aids in conjunction with specially designed workbooks constituted the reading program. The emphasis was on increasing reading rate. However, as the programs evolved their objectives became broader and more in line with the objectives of developmental reading skills in elementary and high school programs. With regard to emphasis, one of the pitfalls of the writer's planning of an early course in reading improvement was trying to include too many skills and too many materials, which resulted in a sense of pressure for both students and teacher, too little depth and, hence, a less than wholly satisfactory outcome. Experience showed that selecting fewer skills and treating them in greater depth resulted in greater satisfaction for students and in higher scores on objective tests.

Who should be included in a college reading program? If you believe with Goethe that learning to read takes a lifetime, then the choice might be to include all freshmen in the lowest quartile on a compulsory basis and all others, freshmen or upperclassmen, on an elective basis. The reading program at Hofstra University is organized this way.

What materials should be used in a college reading program? There are some very useful workbooks available at the present time but in addition to workbooks the instructor frequently finds it desirable to provide additional materials of his own devising. In considering materials, anyone planning a new program must decide whether or not to use instruments in his reading course and, if so, what instruments. Here the economic factor may make the decision. The judgment of well qualified specialists in the field of college reading varies considerably. Walter Pauk of Cornell University feels that all instruments are useless in a reading program and Cornell uses none. Over a period of some 15 years the writer has used many instruments and discarded many. At the present time the reading program at Hofstra University uses only one instrument, the Controlled Reader Junior.

### The Implementation of the College Program

The implementation of the college reading program raises such questions as the number of students who can be scheduled, the number of hours of course work, whether there shall be credit, or no credit, how one shall evaluate the results. Dr. William Eller suggests four additional factors in implementation, factors which may make the difference between successful and unsuccessful programs: "1. Smoothness and efficiency of classroom procedures, 2. Conditions under which mechanical aids, if any, used, 3. Suitability of instructional materials, and 4. Overall effectiveness of teaching."[4]

From his experience Dr. Eller feels that when a reading course is unsuccessful the problem is usually that the classroom procedures and materials were not carefully planned in advance by a competent instructor. Smoothness and efficiency of classroom procedures or classroom management covers such basic considerations as the distribution and collection of materials used during a class period.

Dr. Eller's second point, "conditions under which mechanical aids, if any, are used," points up the problems common in the use of reading films, tachistoscopes, or other equipment where the room used is not suitable for projecting devices, the screen is poor, the instruments don't work. Anyone who has had to use mechanical devices which are not in good working order knows the exasperation and the frustration both of students and the instructor. Unless instruments are in good operating condition, the program is better off without them.

Suitability of instructional materials is another major factor in the overall success of any program. If one of the purposes of the reading course is to help the student to be more effective in his other course work, then the developmental reading skills should not be limited to the use of workbooks. It should include application in the student's own texts, and such workbook materials as are used should be selected to develop the skills the instructor feels should be emphasized.

Effectiveness of teaching, however, is probably the single most important ingredient of a successful reading program. The college reading instructor who wishes to be effective might well take the model given a high school teacher for developing a reading skill. The first step in this model is to identify the skill you are going to teach, giving your students the rationale for the use of this skill, showing them how and why it is important for their growth in reading competency. Second, select materials with which you, the instructor, are thoroughly familiar, which you feel will be stimulating and interesting to your students, yet which have no conceptual difficulties that might stand in the way of their getting the principles of the skill you wish to teach. If you feel there may be any such conceptual difficulties, clarify them before you teach the skill. Third, demonstrate the skill for them step by step. Fourth, guide them through the use of the skill using different materials. Fifth, give them practice in the use of the skill, and, Sixth, give them more practice.

Another equally important aspect of effective teaching lies in the instructor's ability to set the proper learning climate within the classroom. The atmosphere of the reading program should be such as to allay anxieties and to release the energies of students so that they can better learn. If a rigid, authoritarian type of classroom organization is used, where speed is emphasized, the reading course may increase pressure and frustration rather than allay them. The students with reading problems frequently have social and emotional problems as well. For some, counseling and individual conferences may be needed in conjunction with group instruction. For all, however, an atmosphere which permits free group discussion helps both to promote the feeling of security and to promote the development of critical judgment in reading. Students who have difficulty in verbalizing their ideas and in selecting one interpretation over another will learn to better verbalize their ideas and to test one interpretation over another through group discussion.

Planning and implementing a college reading program is an educational challenge of the highest order. None but the inspired and hardy should try. Teaching a freshman reading course is far more difficult and demanding than teaching a graduate methods course, but for those who accept the challenge, and succeed, the rewards are equal to the demands.

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# REINFORCEMENT COUNSELING WITH SMALL GROUPS IN MODIFYING STUDY BEHAVIOR OF COLLEGE STUDENTS

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Tens of thousands of students withdraw from institutions of higher education every year because they fail academically. They fail to meet the minimum standards for scholastic success defined by colleges and universities. They fail to measure up to the required standards of successful achievement specified by scholarship committees. They fail to achieve the minimum GPA required for continued enrollment in the colleges and universities.

Why do these students fail? College reading specialists, student personnel workers, college administrators and faculty have been seeking the answer to this question for a long time. Some evidence has been reported suggesting that imprecision of screening process is related to failure of college students. This factor appears to be minor, however, in the face of the evidence identifying study behavior as a variable directly related to academic success. Studies have been conducted in which a correlation has been found between students' study behavior and academic success. Studies such as those reported by Bragg (1965), Farnsworth (1955), Harris (1940), and Rust (1955) clearly indicate a relationship between the scholastic success of college students and the students' study habits, methods of study, time spent in study and use of library. These findings appear to be highly significant insofar as identifying study behavior as a variable related to academic success. The studies, however, do not appear to go far enough. It does not appear to be sufficient to say that academic success is related to effective methods of study. Means must be found by which effective study behaviors can be developed in students who otherwise may be scholastic failures or academic dropouts. There is a need in college and universities for effective study programs which can be implemented by available college personnel.

A major aim of higher education is to graduate as educated students those who have been accepted for admission to the institution. To the extent that college students fail academically, the institutions of higher education fail. What can colleges and universities do to increase the chances of success of the students admitted to the institutions?

It was an attempt to find an answer to this problem that Oregon State University has been conducting research on ways to improve study habits of college students. A pilot project was carried out in 1963 using only students on academic probation. The findings from the pilot study clearly documented the viability of the assumptions underlying the experimental program development. A large-scale study was conducted in 1964-65 and the project was expanded and continued this year under grant from the U. S. Office of Education.

## Procedures

The program at Oregon State University was developed on the basis of a set of assumptions. It was assumed that study habits are patterns of behavior made up of consistent ways of responding to school-provided stimulus situations. It was assumed that college students make study responses when they schedule time, take notes on readings or lectures, read texts or references, write reports or term papers, prepare for and take examinations. It was assumed that these study habits are learned responses and therefore can be modified.

A critical question raised at this point was, "How can the study habits be modified?" A search of literature revealed that reinforcement counseling had proved to be effective in modifying behaviors of Ss in individual and group situations. Research reported by Ryan (1964); Schroeder (1964), Matarazzo (1963) documented the effectiveness of the reinforcement counseling to modify behaviors of youth and young adults.

On the basis of these assumptions a program was planned using reinforcement counseling as the procedure by which the study habits of college students would be improved. In developing the program a major consideration was the question of practicality. It was agreed that the ultimate aim was to have a program which would be continued beyond the experimental period, which could be implemented by existing personnel without requiring additional faculty or specialists. In light of these considerations and in view of the complete support offered by the Dean of Students and his staff, it was decided to develop the effective study program to be implemented in university residence halls using non-professional personnel, student-advisors or resident-assistants in the counselor-leader role.

What was the program to develop effective study behaviors in college and university students? A planned program of reinforcement counseling with students in small groups in the residence halls was used to increase effective study behaviors. Students living in the university residences were given the chance to volunteer for participation in the Special Study Project. Of those volunteering, a sample of 160 Ss was selected randomly. All Ss were given Brown Holtzman SSHA as a pretest, to allow for adjustments for initial differences. Pre-program GPAs were used also to adjust for initial differences among students when post-treatment comparisons were made. All of the counselor-leaders for the program were students in the residence halls. The student-counselors were given training in the appropriate techniques prior to the start of the program. Training consisted of lecture, demonstration, and role playing. The student counselor received a special counselors packet which contained materials and directions for conducting the group sessions.

Four variations were used in the project, to permit comparisons which would give some idea of the effectiveness of the program. The four experimental conditions were as follows: (1) cue-reinforcement, in which student counselors gave specific cues and reinforced verbally all favorable study habits responses; (2) reinforcement, in which student-counselors gave only general cue, "What do you think about (topic for the session) and reinforced all favorable study habit responses; (3) placebo, in which student counselors passed out written materials on the topic but gave no verbal cues and no reinforcements; and (4) inactive control composed of students who had volunteered for the project but were not selected as participants. The Ss who volunteered for the project were assigned randomly to the four approaches.

During the quarter weekly, thirty-minute, semi-structured group sessions were held in the university residences. Each session was focused on a selected topic relating to good study habits, including "Why College?" "Planning Schedules," "Taking Notes," "Reading Assignments," "Writing Papers," and "Taking Tests." Each group was composed of the student-leader and four volunteer participants. In each group the student-leader used one of the four techniques throughout the seven sessions.

In the cue-reinforcement the student-counselor gave specific cues, leading questions, about every three or four minutes, and he reinforced verbally all the good study habit responses made by the participants. His reinforcers were verbal responses such as "Good idea," "That sounds like a good point," "Hm mm," "Wonderful." The reinforcement approach was similar except that the student-counselor gave only general cues, such as "What do you think about planning schedules?" "Any idea?" He used the same reinforcement technique as counselors in the cue-reinforcement approach. The student-counselors did not lecture, did not say "this is a good way to take notes," did not punish or criticize any of the ideas expressed. If a participant suggested a technique which generally would not be accepted as a good study behavior, the student-counselor made no response other than to redirect the discussion through cueing.

### Results and Implications

At the end of the quarter the four approaches were compared in terms of students' use of effective study behavior, as measured by a study habits inventory, and academic performance as measured by GPA. A comparison of scores on Study Habits Inventory, administered at the end of the quarter, revealed that the difference between scores on control Ss and experimental Ss was significant at .001 level. Mean score for cue-reinforcement Ss was 201; reinforcement, 198; Placebo control, 178; inactive control, 176. End quarter adjusted GPA's for the four groups were 2.76, 2.73, 2.16 and 2.16. The most effective procedures proved to be the cue-reinforcement and reinforcement techniques.

The findings from this study indicate a means by which a program with high probability of success in producing favorable results might be implemented under conditions and limitations of the college setting. The findings suggest tenability of an approach involving use of non-professionals in a counseling role, working with small groups of students. The results show that regular college residence hall advisors with minimum training can use planned reinforcement counseling in small group sessions to modify study behavior of students in residence halls. The study demonstrates that colleges and universities can do something to improve study habits of potential scholastic dropouts. The study suggests a way by which institutions of higher education might meet the responsibility to see that the students enrolling in colleges and universities achieve scholastic success.

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# AN EXPERIMENTAL INVESTIGATION OF THE EFFECTIVENESS OF A BRIEF STUDY SKILLS PROGRAM FOR FRESHMAN COLLEGE CHEMISTRY STUDENTS[1]

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Proficiency in study skills has been shown to be a factor in college success.[2] Improvement of study skills has been shown to reduce attrition[3] as well as have other positive effects on the students who improve.[4] The number of college reading and study skills programs has been increasing.[5] However, analyses of the effects of such programs have shown (a) need for better controls on ability and motivation of experimental students[6] and (b) that such programs have been effective in helping students improve grades in verbal but not in scientific fields.[7] Although the need for special study skills programs designed for students pursuing specific curricula has been expressed in some of the more recent program evaluations,[8] a review of currently available study skills programs for college students revealed that such programs had yet to be developed. Recognition of this situation encouraged the writer to undertake the present study.

## The Purposes of the Study

The major purpose of the study was to investigate, while stringently controlling the effects of both ability and motivation, the effectiveness of a study skills program for freshman college chemistry students in terms of achievement in chemistry and in terms of overall first semester achievement.

The study was also concerned with:

1. the effectiveness of the experimental program in terms of immediate improvement in reading vocabulary, reading comprehension, reading speed, study habits and attitudes, and listening comprehension.

2. comparison of personality traits of students who persisted in such a program with personality traits of a comparable college population on scales of introversion-extroversion and stability-anxiety.

3. relationships between the measures used and (a) chemistry achievement and (b) overall first semester achievement.

## The Sample Population

The population from which the experimental and control groups were drawn consisted of first-semester freshman students who completed Chemistry 1 at the University of Maryland during the fall 1964 semester, who had no previous college experience, and who initially indicated that they wished to participate in the study skills program. The experimental group consisted of the 73 students who completed the entire program and the control group consisted of the 224 students who were never offered an opportunity to participate.

An additional comparison between the 427 students initially interested and the 641 students not initially interested in participating in the program was made. This comparison was made on all 1068 freshmen who responded before the program and included the experimental and control groups as well as those students who did not complete the experimental program.

## The Program

The content of the experimental program was based upon findings from a review of currently available study skills materials and a review of articles covering previous reading and study skills programs for college students. It was attempted to develop a specific reading and study skills program for a scientific subject, i.e., chemistry, by applying as closely as possible the most relevant presently-known study techniques to this area. Five basic areas of concentration were chosen: (a) planning of time, (b) listening and note-taking, (c) efficient use of textbooks, (d) memory and concentration, and (e) preparing for and taking examinations.

The program included six 50-minute sessions plus pre- and post-tests. Students atended the six sessions in groups of eighteen or fewer.

## The Measures

Students' American College Testing Program (ACT) scores were used as measures of their ability. Measures of fall 1964 achievement were Chemistry I grade and grade-point average. Standardized tests administered immediately before and immediately after the program were the **Nelson-Denny Reading Test**: vocabulary, comprehension, total score, and rate; the **Brown-Holtzman Survey of Study Habits and Attitudes**; and sections of the **Cooperative Sequential Tests of Educational Progress, Form 1A**, listening test. The **SA-S Senior Scale** measures were administered before the program only.

## The Controls

Control on motivation was maintained by limiting both the experimental and control groups to those students who indicated interest in participating in the program. Control on ability as indicated by the five ACT subscores singly or in combination was statistically maintained by covariance techniques.

## The Procedures

With the cooperation of the Chemistry Department a description of the study skills program was read in the laboratory sections of Chemistry 1. Students then completed cards on which they indicated whether or not they were interested in participating in the program. Interested students were then randomly selected for inclusion in the program and appropriate notices sent. Students took a battery of pre-tests, participated in the program, and then took a battery of post-tests. Those who attended all six sessions and took the tests comprised the experimental group. The students who indicated interest in participating in the program but were never offered such an opportunity comprised the control group.

Data were analyzed in terms of hypotheses appropriate to the two major purposes and the three minor purposes of the study. Analysis of variance, analysis of covariance, t-tests of significance, and product-moment correlation techniques were used.[9] The .01 level of significance was employed in analyses throughout the study.

## Summary of Findings

The review of the literature revealed several reading and study skills programs that were successful in helping students significantly raise their grades in verbal subjects but no program that helped students significantly raise their grades in scientific areas.

The majority of students in the experimental group were single male engineering students seventeen to nineteen years of age. Normative data obtained from all available ACT scores for 1964-1965 University of Maryland entering freshmen indicated that the means of all the ACT subscores of the experimental group were above average for their class. However, when compared with normative data obtained from scores achieved by the freshmen entering the College of Engineering, the means of the experimental group were above average on four, but below average on one ACT subscore. That score was mathematics.

When the ACT subscores of all students in the population who were interested in participating in the program were compared with the scores of those who were not interested, the latter group was found to be significantly higher than the former on just one measure. That measure was, again, mathematics.

Tests of the two hypotheses revealed that when ability as indicated by the ACT subscores, singly or in combination, was controlled, there was no significant difference between the experimental and control groups either in chemistry grade or in grade-point average.[10]

Students in the experimental group were significantly better on post-test measures than on pre-test measures of reading vocabulary, reading vocabulary combined with reading comprehension, reading rate, and listening comprehension. They did not differ significantly on pre- and post-test measures of study habits and attitudes.

There was no significant difference between the experimental group and a comparable group of college students[11] on the SA scale, a scale which measures introversion-extraversion. On the S scale, a scale which measures stability-anxiety, the experimental group was found to be significantly more anxious than the group to which it was compared.

Given in descending order of magnitude of correlation, the following measures of the experimental group were found to correlate significantly with chemistry grade: grade-point average, ACT composite score, ACT English, ACT mathematics, the listening comprehension post-test, and ACT social studies. In similar order, the following were found to correlate significantly with grade-point average: chemistry grade, **Brown-Holtman Survey of Study Habits and Attitudes**, post-test and pre-test, ACT composite score, the listening comprehension post-test and ACT English.

## Conclusions

The findings of the survey of related research indicated that research on and the development of materials for the teaching of reading and study skills for scientific subjects has received less attention and attained less success than for the more verbal fields.

Within the limitations of the study the following conclusions appear to be justified:

First, a short program based on traditional study skills, such as the program developed for the study, may be successful in terms of immediate gains on standardized tests of reading and listening. However, such a program may not, when the effects of ability and motivation are controlled, bring about statistically significant improvement in chemistry grades and grade-point averages of students pursuing engineering and scientific curricula.

Second, students who voluntarily participate in such experimental programs may be more anxious than other college students. However, in this study, it was not ascertained whether the anxiety was due to temporary difficulty with subject matter or to more permanent personality traits.

Third, compared with college freshmen as a whole, students pursuing scientific and engineering curricula are above average in mathematical proficiency. Students who volunteer for assistance in study skills for such curricula are significantly lower in mathematics than students who do not volunteer.

The conclusions presented above may well be accompanied by three considerations:

First, the marking system was limited to grades of A, B, C, D, and F, with C the predominant grade. Although participating students may actually have made some improvement, the measures may have been too coarse to detect it.

Second, findings pertaining to anxiety are limited by the fact that the norm group was small and may not have been entirely comparable to the group that participated in the experimental program in that it contained both freshmen and nonfreshmen and was not confined to students pursuing scientific and engineering curricula.

Third, the sample was restricted to one group of University of Maryland freshmen. Further research would be needed to confirm the generalizations derived.

### Recommendations

Within the field of study skills further exploration is needed regarding the mathematical and other understandings which are necessary for the study of chemistry and other scientific subjects. Programs to help pupils attain proficiency in these understandings and skills could be developed and evaluated.

An experimental study such as this one might be repeated under circumstances which permit more precise measurement of achievement than do the usual letter grades. Furthermore, achievement of participating students might be evaluated for several semesters following the program.

The effectiveness of introducing pertinent skills at the elementary and secondary levels might be explored.

The identification of the specific study skills involved in scientific subjects, the development of the most effective ways of helping students become proficient in these skills, the identification of students who can and need to improve in such skills, and the ascertainment of the grade and ability levels at which these skills may most effectively be developed may be urgent and profitable areas for further research.

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# PREPARATION FOR SPECIALISTS IN TEACHING COLLEGE READING

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The need for qualified SPECIALISTS IN TEACHING COLLEGE READING is an aspect of poverty found in our academic world. The NEED is imperative! The QUALITY is a must! This is especially true when one considers the varied roles that the teacher of college reading is expected to be capable of performing. Because of the sundry functions expected of him, prudent prospective college teachers of reading should indulge in some type of self-inquiry before considering a position at any institution of higher learning. He should inquire of himself:

1. Have I the qualifications needed to prepare the currently enrolled thousands of pre-service teachers who will be teaching children to read?
2. Am I qualified to help those college students who desire to improve their personal reading skills?
3. Am I qualified to prepare the growing demand for reading specialists whose goal is to work with teachers and children in reading improvement programs within a given school? within a given school community?
4. Am I qualified to educate those students who wish to become reading clinicians?
5. Have I the qualifications to help educate those students whose aim is to become future staff members in institutions of higher learning, the group whose "hopes" are to educate and prepare others?

Unequivocally self-interrogation of this nature can be synthesized in two queries, namely, "What kind of person must I be to become a specialist in teaching college reading? What kind of preparation will best qualify me to fulfill the responsibilities expected of me at an institution of higher learning desiring my services?"

### The College Specialist — A Person

The specialist in teaching college reading is a person. Therefore, before mapping a course of professional experiences and knowledges for the specialist to follow, it appears judicious to view the personal qualifications of the specialist who plans to prepare others to teach reading. Of course, no two people are alike. They are not expected to be. Yet, a reading specialist will find the qualties listed below most desirable to selection committees at institutions of higher learning. In fact, they have the right to expect the following from specialists in any field of endeavor:

1. to be intelligent.
2. to show a desire to learn.
3. to indicate dedication to the goals and objectives he has set forth for himself.
4. to be a "thinker" and "doer" rather than a "status seeker". Status will come with hard earned work.
5. to know, understand and have the power to use language without being a verbalizer.
6. to enjoy and appreciate the importance of people and children, being sensitive and sympathetic to each as human beings.
7. to be perceptive as well as personal.
8. to have emotional maturity which will enable him to differentiate between constructive guidance and constructive criticism.
9. to indicate a willingness and desire to become a well-informed, resourceful, and creative professional.

The personal qualities listed above may appear to some as an extravagant kind of wishful thinking. Yet, no professional will quibble with the fact that the personality factors of those who are preparing to teach others should receive high priority consideration. Sights in personal qualities of human beings can never be set too high!

### The College Specialist — His Professional Preparation

Those of us who are involved with the professional preparation of the specialist in teaching college reading have one image in mind—the finished product, a product of whom we can be proud. But to do so, a course of direction must be charted to include careful assessment of the perspective's personal qualities, his experiences, and his previous professional preparation.

Because so few of us set out with our first course in college reading with any thought of becoming college teachers of reading, we can guide our novices in terms of "the gaps" we experienced in our professional preparation. Too, we must remind ourselves with, "What pre-professional offerings can we hopefully expect from students seeking to specialize in reading?"

Thus, perhaps it is wise for the prospective candidate interested in graduate study in reading to engage in some type of self-appraisal with the supervision of an advisor. The following queries have been found useful in guiding pre-graduate candidates in such an assessment:

1. Do you understand the importance of all aspects of reading?
2. Are you young enough, yet not too young, to embark on the long road ahead to become a specialist in reading?
3. Have you experience teaching primary grade children to read? intermediate grade children? children beyond the elementary school age?
4. Have you a clear understanding of the language process, being fully aware that reading is the third facet of language?
5. Are you cognizant of the many kinds of reading programs, ranging from developmental reading to clinical reading?
6. Are you generally familiar with all the available reading instructional materials and media?
7. Do you feel that you have experienced a well-grounded broad general education?
8. Do you have a clear understanding of how children learn in relation to how they grow and develop? In other words, can you give more than "lip service" to the phrase "individual differences?"
9. Have you experienced relating reading and all phases of language to reading materials in the content areas? to reading enjoyment?
10. Do you have some "know-how" in the area of Children's Literature?
11. Are you interested in reading and studying research that you can determine acceptable practices from non-acceptable practices?
12. Do you like to read?

Reactions to the queries listed above will be a rugged test indeed whether the "prospective specializer" wishes to continue the work of the years ahead. At the same time, such reactions will also serve as an excellent "springboard" for an advisor in planning the professional program of his advisee for the road that lies ahead.

Naturally, planning the road ahead for the specialist in teaching college reading will depend upon many facets, the most important being **the person** himself. However, there are many other items that must be considered including:

1. the previous experiences and education of the "pre-specializer" in relation to the goal(s) he has set for himself.
2. the time that can be devoted and the financial aid that can be made available for a person desirous of working toward a doctorate in reading or its equivalency.
3. the total curriculum that is being offered at the particular institution.
4. the staff offerings in reading and in other disciplines.

But, in spite of the above, there are certain "shoulds" which most students of reading consider imperative in preparing those who wish to teach at the college level. Therefore, let us examine and discuss some of these "shoulds".

1. The student should have a Bachelor's Degree and at least three years of successful teaching.
2. The student should become a member of a fifth-year program leading to a Masters Degree. This program should be planned by an advisor to meet each individual's needs with special emphasis upon research and field study in reading. All experiences should be carefully supervised by the advisor coupled with seminar experiences.
3. The program of professional studies should be planned with the advisor for the five-year program and to continue if the student desires further specialization in reading. The program should be so designed that course selection can be made from the following disciplines: psychology, sociology, anthropology, child growth and development (advanced), mental health and hygiene, individual testing, group testing, statistics, research methods, children's literature (advanced), phonetics, linguistics.
4. In addition to the professional studies above, at least eighteen semester hours should be devoted to special seminars in reading and specific areas of concentration in reading including: the psychology of reading, word perception (to include the study of phonics, structure and other word recognition techniques), comprehension, diagnosis and appraisal, remediation, and instructional materials.
5. During the fifth-year program and while continuing studies for further specialization, the student should participate (supervised by his advisor) in the following activities
    - (a) assessing the offerings and worth of professional publications and organizations.
    - (b) collecting research data (which may be used in his dissertation study).
    - (c) assisting in all the functions of the teacher of college reading.
6. To climax the specialist's preparation, he should serve for one year an an intern with a person deemed qualified by his advisor. This phase of his professional preparation could take place when the dissertation is in its final stage of completion.

True enough, it would be difficult for most institutions to afford their students who wish to be specialists in teaching college reading a program such as has been described. However, if the structure presented can represent a framework in which we can work, graduate students, upon completion of their doctoral study or its equivalency will be well prepared to apply for a college position in reading. Thus, my plea is a simple one — LET'S TRY!

# THE COLLEGE ROLE IN ANTI-POVERTY READING PROGRAMS

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The involvement of university people in anti-poverty programs can significantly influence reading projects which can be effective and make a worthwhile contribution to education or simply breed mediocrity in education at an excessive cost. Essentially, if a university accepts a commitment to a program and utilizes community resources, it tends to provide a force leading toward excellence in education by virtue of its theoretical, practical and research expertise. That is the premise of this paper.

I believe the intent of anti-poverty educational programs is twofold. First, they should render a valuable educational service for school children, and secondly, make an impact on the educational system which produces a higher quality of education. The essence of both these intentions is the caliber of teaching that takes place, and this is the area in which the college is best prepared to serve.

Serious questions have been raised concerning the quality of education provided by our schools, and both schools and teacher training institutions have received their share of criticism, particularly in the area of reading. Much of this is supported in fact. There is no need for any further finger pointing because we are aware that the problems do exist.

Evidently, school personnel and the university must assume more leadership—leadership by pulling the wagon and not simply jumping on it. It appears as if the dramatic legislation affecting education comes from Washington only to find that there are not enough qualified personnel to effectively implement such programs. This is true of anti-poverty educational programs, the Elementary and Secondary Education Act, and is also true locally in light of the Beadelston Act and the Grossi Amendments. The reasons and the need for such legislation is not questioned, but there is a question concerning adequate preparation for and the implementations of such programs. The university must exercise initiative by revising the curriculum for teachers in light of trends that are foreseeable and can be anticipated rather than waiting for the demand to dictate curriculum modification. Certification requirements must be perceived as minimal training and teacher training colleges should be more concerned with the development of competencies in teaching, especially that of reading, rather than subscribing to a pre-determined magical number of credits that sometimes endorses mediocrity.

Teachers and administrators have been apparently bogged down and have failed in grass roots leadership because so much energy has been directed toward improving the standard of living for the profession that they have not, up to more recent times, been involved with pure educational matters. School administrators have been, as Mary Austin recently pointed out, more concerned with the four B's—bonds, buildings, buses, and budgets—than maintaining, experimenting, and reconstructing the educational process in the schools. We must agree that both colleges and schools have faltered in the area of educational leadership.

These factors are stated not to demean all colleges and school districts because it is not true of all colleges and communities. It's merely done to clear the air. The role of the college can be qualified and presented as a positive influence when it serves as an adjunct service to reading projects to aid in providing better services and improving the quality of instruction. To do this effectively, its role should be basically limited to functioning as consultants to projects.

Limiting participation to consulting services allows for full utilization of university facilities by many community resources. The university brings to community resources expert evaluation in a given area, broad experiences in the field, the knowledge of current practices, a source of recruitment and training for personnel, and research orientation to a project. All of these areas are significant contributions. The university can be involved in many projects and have knowledge of other similar projects throughout the country which provides a frame of reference for valuable factors which should be built into programs. Teacher training in specialized areas at the college provides a population with an established interest in wanting to work in specialty areas. As consultants, they should be put in a position of offering in-service programs to the project staff. Each project should make some effort to find ways and means of improving instruction. Because of the background of university people, they can offer a design geared to experimentation that sheds light in the area of improving instruction. It appears that there are many things to be learned from these projects which will never go beyond their confines because no focal points are established initially to evaluate what has taken place. We must go beyond the stage of demonstration projects that establish the effectiveness of reading programs to point out factors which contribute to both successes and failures.

These functions should also lend themselves to the establishment of closer cooperation between the schools and training institutions. The benefits derived from cooperative efforts can only tend to build a bridge of mutual respect for one another because the relationship inherently requires the tempering of ideal and practical aspects of education that lead toward progress.

The obvious concern now is to establish the elements of a model to promote better understanding between the two forces and upgrade the quality of education. Although there are many important aspects previously treated herein, this paper will address itself to those facets of a remedial reading project which deal with the development of competencies in personnel rather than research factors which can reasonably be integrated into the project. These elements are basic to the functioning of the program and appear to be the kinds of things which can influence professional growth as well as being feasible in their implementation.

Before a community can solicit the assistance of a college to help in program development, the college must first be willing to free staff members for this type of participation. The burdens of accepting such participation must necessarily infringe upon the normal duties of the college teacher which typically include research activities, professional writing, student advising, maintaining and extending knowledge in his field, and professional activities as well as teaching. Therefore, the administration of the college must be willing to accept staff participation in lieu of some of the activities or reduce his teaching load proportionately so as not to over-extend the staff because consulting work is time consuming and is a scholarly endeavor.

The consultant to a project should conduct training sessions with the staff, assist in staff selection, guide program supervisors, aid in providing bibliographies, materials, and sources for the program, design organizational patterns, design and collect systematic data pertinent to evaluation and research, advise at selected case conferences, and maintain coordination between the project and the college.

One way to improve professional competencies, draw qualified personnel into the field of remediation, and establish a bond between the university and project, is a team approach to teaching. A fully trained remedial teacher would be assisted by a teaching aide to work with a group of children numbering from 5 to 12 per class. The teaching aide would have basic teaching certification and might or might not be employed full time by the community implementing the program. However, a condition of contract would stipulate that the teaching aide enroll in a graduate program leading to specialization in remediation. This affords a rich opportunity for academic, theoretical, and practical training for the trainee.

In order for this to be workable, the roles of the master teacher must be clearly delineated. The master teacher is responsible for the educational design of the program that takes place in class. As part of his duties, he will supervise the work of the training aide, assist in planning the teaching aide's work, assign suitable tasks, coordinate efforts, and provide guidance so that the teaching aide may perform most effectively in the remedial situation. Obviously, the teaching aide functions as a teaching assistant and is capable of teaching individuals or small groups by virtue of his teaching experience.

Other considerations in this relationship are the teaching loads and the remuneration received by the personnel. The master teacher would receive a rate slightly higher than that of the teacher aide and assume a heavier teaching load. The rationale for this is to give the teaching aides a higher aspirational level and also to provide them with a source of income to pay for further education. Because teaching aides must devote time to graduate studies, their teaching load must be considerably less than that of the master teacher.

If teaching aides are students who have been recruited from the college employing the consultant, the benefits derived become innumerable to both project and college. The college has the distinction of providing an on-going practicum for its students under a program inherently endorsed by the college because of its involvement. The teaching aides are working under people particularly suited to their jobs. The consultant must be on hand and can assume the position of college supervisor for the students. The project has a teaching staff composed of qualified personnel and those who may be considered partially qualified. The community is developing a recruiting device by having a corps of potentially qualified people already involved with the community program. If personnel are selected from the community's school district, it tends to upgrade staff competencies, provides incentives for the continuing education of the staff, develops staff opportunities to move into specialized positions, and earmarks the community as one which is doing something about improving the quality of education.

The role of the college in anti-poverty reading programs as stated herein is limited. Its focal point is a suggestion aimed at developing and recruiting qualified personnel by utilizing the college staff on a consulting and integrated basis. This is not to limit the involvement of the college to this alone because other significant factors have been touched upon. It does, however, specify an area of deep concern and a possible solution that colleges should be equipped to handle that can improve services to children by upgrading the quality of instruction. It is our experience that the quality of any educational program is determined by the quality of instruction. This can be achieved most expeditiously by cooperation between the schools and colleges in a common endeavor.

# STRUCTURING A READING AND WRITING SKILLS PROGRAM

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## Purposes And Facilities

At Brooklyn College up until 1960 there existed two separate non-credit courses in the English Department known as the English Workshop and the Reading-Study Program. In February of 1960 these separate service entities were merged into one program known as the Basic Skills Center under the jurisdiction of the Office of the Dean of Students. The stated purposes for the consolidation at the time were threefold: to simplify referral of students deficient in the communication skills on a college-wide basis; to centralize facilities for meeting students' remedial needs; and, to provide facilities for able students to further sharpen their academic techniques.

So it was that the Basic Skills Center came into being on a voluntary, fee basis and under the direction of the Dean of Students. Initially it was thought that the Center would deal with the communication skills of listening, speaking, reading, and writing. However, with the type of physical facilities subsequently provided, it was impossible to put such an extensive program into effect. Forced to curtail services, it seemed feasible at the time to offer instruction in reading, writing, and general study skills only. With further limitations of floor space, it seemed advisable to organize the program into two divisions of reading and writing. Work in general study skills logically fell into the reading division. For the first semester, then, services in these areas were offered to the students in the College of Liberal Arts and Sciences, known at Brooklyn College as the Day Students. In another year, offerings were expanded to include students in the School of General Studies, known as the Evening Session Students. Facilities and services were also offered to graduate students and those faculty members who requested them.

## Organization Of The Program

Each division in the day session operated under the same general format—six weeks, three periods per week scheduled according to the students' individual programs. The evening session also ran for six weeks, but for two seventy-five minute periods per week. Both sessions followed the same procedures of pre-tests, group lectures, individual practice periods, conferences, and post-tests. The same testing program was used for both divisions and for both sessions. The tests were the Nelson-Denny Reading Test and the Barrett-Ryan-Schrammel English Test. Students were charged a fee of $60 for a six-week period, but if they repeated a period or enrolled again in the other division, they were charged only $20 more.

### Procedures And Materials

The Reading Division:

Even though small groups of students were meeting at the same time, every effort was made to have each student progress at his own rate and according to his needs. After the pre-test, to help plan for individual programs, each student took the **Survey of Study Habits and Attitudes,** followed by an interview with the instructor. Everyone started the course with a two-hour lecture period in which films were viewed and discussion carried on relating to the reading of textbooks, taking of notes, and using phrase reading techniques. After this initial lecture the students were engaged in their own program of improvement. The California Reading Films were used with some students to help in applying phrase reading techniques. As an additional aid in helping to overcome word reading, acquiring efficiency in reading increasingly longer phrases, and helping to make perception more accurate, the tachistopscope was used. For increasing rate and breaking the habit of regression, the students had access to the accelerator machines. Throughout the six-week period the students were encouraged to alternate accelerator-aided reading with independent reading. For the latter, students used stop watches and recorded their own time. The **Telebinocular Survey** was administered to students where sight difficulties were suspected.

To develop effective comprehension, study skills were discussed in individual conferences and students were guided in the application of these skills to the reading material provided in the course and then to textbooks used in their other college courses. Besides having a regular sequence of assignments at the Center, students were expected to follow an outline of homework assignments. The required books for homework were Shaw's **Effective Reading and Learning** and Wedeen's **Advanced College Reader.** Regular assignments were given to the students at the beginning of the course and they were to record their results on Summary Sheets which were to be brought to the instructor at least once a week.

One of the overall aims of the reading division was to develop an awareness and knowledge of the multi-faceted nature of reading. As the sessions progressed, emphasis was given to the different purposes for reading which call for different approaches, attitudes, and accelerations. The structure of the text, from the word to the sentence to the paragraph, was analyzed through individual evaluation of the results in reading rate and percentage of comprehension.

### The Writing Division

As in the reading division, every effort was made to work with individual students according to their needs. These needs were determined by administering the Barrett-Ryan-Schrammel English Test and by requiring a theme to be written during the two-hour lecture period. Programs were then set up for individual students but they were flexible and could be revised if they needed to be. Instructional time was spent mostly in the mechanics of written expression and a review of grammar was not an unusual approach. Students were also assigned outside work consisting of different forms of composition so that application could be seen and evaluated. Many materials for use at the Center were available such as handbooks, books of readings, dictionaries, and other reference books. Students were required to purchase one handbook and one exercise book.

After two years of operating in this manner, the staff felt that the testing program and some procedures used needed to be changed so that better means of measuring progress would be available. There seemed to be very little relationship between the knowledge of terminology and mechanics for which students were being tested and the degree of improvement in their ability to write. Because there seemed to be an over-emphasis on teaching mechanics so that there would be good results on post-tests, the staff decided to use a test that dealt more with written expression than does the Barrett-Ryan-Schrammel English Test. For the pre- and post-tests, then, the Sequential Test of Educational Progress (Writing Skills) was chosen. The STEP multiple-choice writing test diagnoses the skills of evaluation and revision and the attainment of these skills was considered to be the major goal of the writing division. The text was changed to Dodge's **How to Read and Write in College** because of its effective sequencing of exercises, its supplementary tests and exercises, its suggested theme topics, and the inclusion of reading selections which are followed by questions on content and form. Ostrom's **Better Paragraphs** was also adopted for intensive work on paragraph development. The assignments were broadened to include the student's keeping of a notebook in which something had to be written every day. The procedure became one of write, evaluate, revise.

### Staff

A coordinator on a half-time basis was responsible for connecting all the parts—the reading division and the writing division in both day and evening sessions. Each division had one regular faculty member on a part-time basis who was responsible for both the direction and the administration of the division. Each division also had one or more assistants who were recruited from among the graduate students majoring in English. Retired high school English teachers who would take part-time work were in demand as they had the background and experience of working with students. Although it seemed educationally sound to have students working with an instructor on an individual basis, economically a maximum of eight students was considered a group per hour for each instructor. In practice, the greatest number of students any instructor had at any one time was six; the average was four students per hour.

### Some Post Thoughts

A description of a program does not show entirely the problems encountered or point to desired improvements. We have the records of hundreds of students who made progress on the basis of comparative scores on pre- and post-tests. We also have hundreds of statements made on student questionnaires at the completion of the courses indicating that strides were made in their skill development. These can only be viewed as temporary, however. A valid evaluation could only be made by following the records of these students through their college careers. At this time no formal study has been made to indicate whether or not the program as a whole was successful or achieved the intended goals.

In the thinking of the staff, several impressions, ideas, or solutions evolved and were voiced during the course of the operation of the Basic Skills Center. Some of these suggestions may be helpful to those involved in this work. They are set forth here with no order of priority.

1. To be most meaningful, instruction has to be individualized. Even if students are grouped together, the instruction must be organized so that the individual can work on his own program. This was especially necessary in the program of the writing division.
2. The interchange of ideas between staff members of the reading and writing divisions was stimulating and helpful in working more effectively with students.
3. The interrelatedness of the communication skills was seen most clearly as students' difficulties were diagnosed. Having the Center house both reading and writing facilities encouraged students to enroll in both programs, and indeed both programs were often needed. To make the program stronger, listening and speaking should be added services.
4. Support in the way of understanding and cooperation from all

academic departments of the college is needed if this program is to be a part of college life. Rather than a program apart, the Basic Skills Center should be seen as contributing to the student's success in college and the college, after all, is in the business of educating students.

5. The increasing expense of instruction and equipment calls for increased student fees. Those working directly with the program feel that the institution should be willing to underwrite a substantial portion of operating costs so that high fees will not be the factor in eliminating students in need of remedial work.

# MEASURING AND EVALUATING EFFECTIVENESS OF COLLEGE READING PROGRAMS

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One question that is heard quite often is why the necessity for reading programs in the colleges and universities?

Dean Asheim's summary of research has pointed out four important factors concerning reading at the higher level. 1. Students with the best scholastic rating usually do more "free" reading. 2. Most college students' reading is course-related. 3. Most college instructors expect more reading than they get. 4. It is seldom that much reading occurs on the initiative of the student unless the instructor has provided the motivation.[1]

For these reasons it is important that teachers do something with and for those students who do not have the best scholastic ratings. We need to do something for those students who confine their reading to course oriented materials. Help must be provided so that students do their required reading, have time for "free" or leisure reading, and certainly the desire to read must be an ever present one.

We have read or heard of the expression "mature reading" used many times. However, too often the term refers to functional reading or more specifically information seeking. The mature reader definitely should be a functional reader as well as a pleasure reader.

He should be a self-inspired reader and one who has acquired a positive attitude toward reading. This mature reader will certainly use the most effective communication techniques between the author and himself. He will be able to easily discriminate between the worthy and unworthy portions of an author's message.

In order to accomplish the ends we have just spoken about, various skills and techniques must be acquired by the student and placed into constant use. After we have given the student ample practice he must develop a compelling motive for using skills and techniques.

For many students today, formal reading instruction terminates as they leave the elementary grades. Some states have now required that reading instruction continue through grade eight or nine. Little instruction in reading exists at the high school level.

A great number of students are graduating in the upper segments of their high school classes who have not learned to "read" well and have not developed the kind of study habits and techniques that will be required of them after they enter college. These are students who have a high enough degree of intelligence and ability to memorize or analyze, or synthesize or do all three without exerting a great deal of effort. These students do not develop the need to find effective and efficient techniques in order to study and read outside of their classrooms. However, these are the students who, upon entering the freshman year of college, are invariably guided to the counselling services and the reading and study clinics.

What do we do with these students? How do we evaluate their needs? How do we set up programs to best suit their needs? The answers to these questions depend upon the individual types of programs and their testing procedures.

Some colleges and universities require those students who fall below a particular score on their entrance examinations to take the reading and study program. Other institutions offer the service of the reading and study clinics as a voluntary undertaking. On the other hand the guidance service may recommend or require students who are having particular academic difficulties to enroll in the program. The reading and study program may or may not be given for credit.

There are several types of programs offered at the college-adult level. Sometimes the program might be a separate special service, or a part of a communication arts course, or an inherent part of each subject. These programs might be textbook oriented, machine or mechanical aid oriented, or counselling oriented. They may be offered by the department of psychology, English, education, educational psychology, or personnel and guidance services. In each of these departments a different approach or a combination of approaches might be taken.

Many devices are used in order to evaluate a student's needs. The variance lies within the framework of the philosophy of the program and the department sponsoring the services.

Most evaluations have a similar purpose—that is to determine where the student is and what his needs are. However, testing situations can be planned to do many tasks. They can be an estimation of a possible success one might expect of a student; another might be a political maneuver in order to demonstrate to the students, the parents, and the administration that the program is a great success; another might be to gather research and so on. It is important to test or diagnose and retest in order to find how effective the program is, how the student has been affected, and how the instruction can be made as efficient as possible.

There is a great variety of tests that can be used in order to measure effectiveness. For reading diagnosis we can use tests that measure silent reading ability; reading comprehension involving immediate or long range recall, factual and inferential information, details and main ideas; we can measure reading rate; and reading versatility. We can measure fixation time and eye movement. There are many vocabulary tests that can give us a good indication of verbal ability or lack thereof. Study skills tests and inventories can be administered. Interest and study habits inventories are also being used. Attitude surveys have been developed for college students.

Programs that are sponsored by the psychology department might make use of personality tests, home background inventories, parental occupation scales, psycholinguistic devices, phonetic inventories, aptitude tests, and mental maturity tests.

The English department might make use of the writing samples, experiential background analyses, and speech techniques.

The choice of appropriate testing devices is of great importance. Because we are speaking in terms of college programs, we must be aware that many of our students will score beyond the "ceiling" of the tests which are currently being used. Choose tests wisely and don't be afraid to change your tests. The advertised level of many tests will be found to be quite unreliable.

At its inception, college reading programs were commonly designed to improve rate of reading in words per minute. There are some programs that still emphasize speed over all other aspects of the reading progess. However, the majority of reading programs are interested in vocabulary, comprehension, flexibility, and attitude as well as rate in words per minute.

In order to insure a successful program at the college level, there are several factors that should be considered carefully. First there is the philosophy of the program or the goals. Colvin[2] has suggested the following goals for his ideal program:

1. That every student can and should improve his reading and study skills to optimum level for him.
2. That college reading involves complex skills which may be developed through instruction and practice, in much the same way that writing and speaking are improved.
3. That reading is only one, but a very important, factor in the total adjustment in which students need specialized assistance.
4. That specialized attention to reading is desirable because of the wide range in reading ability which entering freshman demonstrate on standardized tests.

However, Lawshe[3] suggests that the following objectives are probably in practice in most college reading programs:

1. To make the individual readers more critical and observant.
2. To strengthen vocabulary and increase potential for clear understanding and communication.
3. To create diversified reading interest by broadening vicarious experiences.
4. To increase permanently the rate of reading with satisfactory maintenance or rise in level of comprehension.

The second consideration is that of instructor personnel. Those who are responsible for the instruction in our reading and study clinics should be trained in the techniques of reading, vocabulary development, and study skills. In other words, they must be good reading teachers. These qualified people must be prepared to assist the students in the skills and techniques required to master the art of good reading and effective studying. They must also possess the ability to arouse interest on the part of the students to read, encourage students to think in an inventive or creative manner as they read, be able to react intelligently to what is read, and in some instances change attitudes toward reading.

The instructor must be flexible so that he can work in an individualized situation with a variety of personality types and intellectual levels as well as a diversity of materials.

The third consideration is one of materials. A wide range of materials is available. One of the more controversial materials in use today is the mechanical equipment. Such apparatus as the pacing or speed machines, tachistoscopic devices, skimming and scanning instruments, and a variety of speed reading films play a large part in college reading instruction. There are also a number of workbook-type of materials devoted to reading emphasizing speed and comprehension. Many workbooks are also available for study skill improvement exercises and vocabulary development.

Within recent years, several publishers have deluged us with "boxed learning." These are a variety of kits to be used by individuals or small groups. The basic skills of reading, vocabulary development, speeed of reading, skimming and scanning techniques, and study skills exercises are emphasized within the structure of these kits.

Many clinics are making wide use of the self-help techniques by offering students the do-it-yourself type of material to read on their own. Such materials would be the "How To" kind of book which would stress vocabulary development, or comprehension improvement, or speeded reading, or better writing, or more effective speech, or perhaps guides to more efficient study habits.

A variety of materials as well as a variety of approaches seems to prove most effective in the majority of clinics. This inherent flexibility seems to facilitate a more personalized type of instruction.

A fourth consideration is that of the actual classroom or laboratory. This physical facility must be as quiet and free from distraction as possible. It should allow for individual work, group work, and instruction. It should be large enough to house all of the necessary materials and still allow for the relative comfort of the students. The lighting should be appropriate for the task to be performed, namely constant reading.

These four considerations are of considerable importance to the effectiveness of a college or adult reading program.

One of the ways in which one can evaluate his reading program is through the use of research. Research findings can enlighten us as to what other clinics are doing and the kinds of results they are achieving. One can then compare his program with others in order to innovate, change, or modify in some way.

In the June, 1964 issue of **The Journal Of The Reading Specialist,** Dr. Darrel D. Ray reported "A Summary of Investigations Evaluating College Reading Programs." After receiving the research (19 studies), Dr. Ray drew seven conclusions.

1. Each program evaluated reported gains of some kind as the result of a reading improvement program although few studies reported the statistical significance of the reported gains.
2. The most consistent area of gain reported is in rate of reading where all but one reported a gain, with many large gains reported.

3. Eight studies reported gains made in comprehension . . . Where gains are reported in comprehension most are small insignificant gains . . . Six studies reported no change in performance in comprehension.
4. Six studies reported gains made in vocabulary . . . Where gains were reported in vocabulary most are small insignificant gains . . . One report . . . reported a loss in vocabulary score between the pre-training and post-training tests. Eight studies failed to report on any change of performance in vocabulary.
5. A composite, or total, reading score is not given for some of the measuring instruments used in the studies . . . but of the seven studies reporting a total score, five indicated a gain with one reporting a loss, and one reporting no change.
6. The increase in reading performance does not appear to be either a function of the utilization of a particular method of instruction or the length of the improvement course.
7. The lack of gain in reading performance does not appear to be either a function of the utilization of a particular method of instruction or the length of the improvement course.

The author continues to say that these results are of no significant value to those who wish to initiate a program. He does conclude that the variety of methods and approaches used would lead to significant gains in reading performance.[4]

Much more research could be cited at this time, however, it seems to me to be most appropriate to have an open discussion and find just exactly what you are doing and how we can improve our programs.

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# WHAT THE READING TESTS DO NOT TEST

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Of course, reading tests do test a number of reading skills, or at least they yield scores in them: (1) vocabulary (2) comprehension (3) rate—in most tests, and (4) miscellany: follow directions, locate and use reference material, read maps, charts, etc., summarize, draw conclusions and make inferences—in only a very few tests.

Naturally, reading tests can be used for a number of purposes: (A) screening, grouping, supplementary, prognosis, achievement, and diagnosis — as revealed by a rather inclusive study of reading tests; (B) prediction of school success or failure, school surveys to compare groups, selection of pupils for special remedial reading programs, pre-test and post-test in research studies or in differentiated instruction programs — as stated by reading specialists.

Sure, reading tests are useful — in good hands. BUT they are not to be worshipped as infallible. Reading tests can be indicative, BUT they are not absolute and not final—nor even complete. They are only one means among many, some 14 or 15 more, which can be used in a complete diagnosis or over-all picture of reading ability. They can measure one kind of outcome of a reading program, but they certainly do not measure all the numerous and varied aims and objectives of a well-rounded developmental reading program.

So, in giving and interpreting reading tests on our Road of Reading, we should put up a sign, "Warning! Proceed With Caution!" Notice that it does not say stop, but we should be careful in the way we use them. The most important, and in the final analysis perhaps the only, reason for testing is diagnosis, with a view to helping the student help himself become a better reader, And you may define this better-reader concept in whatever way you wish, provided only that the framework of reference is both broad and deep enough so that all persons involved, teachers and students, can function.

Reading tests do not test very many areas of reading; they yield only a few scores. What the tests do not test is vastly more than they do test. Reading tests do not measure a number of very important aspects of reading. Obviously they do not try to measure the desire to read, the need to, reading habits and tastes, the amount and kind of reading a person does, or the pleasures derived from reading. These are too difficult to measure; perhaps impossible.

The reading tests do not measure what we can call the upper reaches of reading. No test can measure the evaluative process of a reader when he weighs and considers the worth of an idea or a proposed course of action, the advantage or disadvantages of a method. Reading tests will ask for an author's idea but not for the reader's own ideas about the author's. Questions are directed mostly to what happened and not to why, mostly to what is true or false but not to why it is so. Most comprehension questions are concerned with facts but not with an appraisal of them or an interpretation.

Critical reading and creative reading are generally conceded to be the highest levels of reading, and these are not measured in most reading tests. They do not lend themselves to standardization. Creativity must remain unique—or die. Nor can utilization of ideas, that is putting them into practice in life, be measured in a paper and pencil test.

Very few tests explore the reading abilities needed in the varied subject matter areas: history and other social studies; English; the sciences, Biology, Chemistry, Physics; business subjects, Economics, bookkeeping, business law; plus other subjects now introducing more reading such as home economics, music, and shop courses. In addition, the tests frequently do not ask enough questions about any one selection, and they do not always ask the important ones.

Pursuing this line of thinking a little further, as should be done, we find that even though the test does get into a content field of reading, for example English, it never fully explores all the various types of material in that particular field. To be fully covered, English has the following areas: poetry, drama, essay, short story, biography and the novel. And each of these could have subheads: drama has tragedy, comedy, historical, character, and problem plays concerning social, economic, political, or personal predicaments. The novel could be historical, problem-oriented to personal or social, adventure, mystery, love, and so on: the same applies to the short story. Now if you wanted to test all these areas and sub-areas—yes, I agree, far too many and much too much time would be needed. Yet, each of these takes a special kind of reading ability to get the most out of them, and being quite capable in one area does not guarantee that the person will be just as capable in another.

As they say in the navy, "Now hear this" and consider it closely in your thinking about reading tests. May I express the idea in a kind of formula used in algebra and involving a symbol for "less than" (<) and "greater than" (>) $R=W=GR$. If the reader gets out of the material all or nearly all, 95%, of what the writer has put in, he is a good reader. $R<W=PR$. If the reader loses a great deal of what the writer put in, he is a poor reader. $R>W=CR$. If the reader adds to what the writer said, he is a creative reader.

What then are some of the things a writer puts into his material which the GR and the CR extracts? This list is long but is not tedious and is highly rewarding. Style, irony, figures of speech, characterizations, allegory, narration, symbolism, theme, description, overtones, cause and effect relationships, inferences, allusions, tone, and the writer's attitude, and underlying assumptions, to mention a great many. But not all. Sentimentality, weasel words, loaded questions, semantics, understatement and overstatement, propaganda, bias, name-calling, character assassination, destructive adjective and adverbs; you can fill in others. The list is truly long, but do not forget that reading is a life-time Operation Improvement.

But we were speaking of what the reading tests do not really test; to remind you and myself. In all frankness and in truth, I feel it must be said that the longer the reading selection, the less likely are we to test it, and the less we know how to teach the reading of it. Conversely, the shorter the unit of reading, the more we can and do test it and the more we know how to teach it. These units go from the meaning of a word to sentence comprehension to thought units, then to paragraph comprehension, to understanding the whole selection. We can more easily test vocabulary than a short story, more easily test sentence understanding than the comprehension of an essay or play. Also, it is easier to teach vocabulary and word-attack skills than the full understanding and appreciation of an epic poem or a full-length novel. In these latter areas of "testing" and teaching we are "on our own." These tests must be teacher-made.

There remains for our consideration one more important point in this untested area. It is the highly important consideration called critical reading. By definition, if we can agree on this, critical reading is not fault finding or judging with great severity, but rather it is mentally skillful judgment as to the merit or truth of a statement or idea or total presentation. It is not only discovering the whole truth about **what** is said by the author, but it is also discovering **why** it it is true, or not, or only partially true. When you can find out not only what was said but also why it is valid or not, you are not only a comprehending reader but also a completely-capable critical reader. You have arrived at the pinnacle of reading, and you can look down first this side and then that side of this high mountain. You can now distinguish this side which we shall label **denote** and that side labelled **connote.** You can see implications, inferences, fine shadings of meaning; you can read not only what is on the lines but also what is between the lines, or beyond the lines. Your reading diploma will read **Summa Cum Laude.** And both Tom Carlyle and Somerset Maugham would agree that you can really read, no matter what the reading test says or fails to show.

Thomas Carlyle: "If we think of it, all that a university, or any highest school can do for us, is still what the first school began doing, teach us to read."

Somerset Maugham: "Read books not to gain information. You can get that as you need it at any time . . . Read not to get ideas, but read mainly to gain intellectual and moral stimulus. Read in this mood and the great books will increasingly enable you to think out your own ideas. One soon tires of a book that does not make him feel now and then like getting up and walking the floor under the impulse of some larger vision of truth."

One of the finest measures of **good writing** is that it makes you **think.** One of the finest measures of **good reading** is that you **stop reading to think.** Another important measure is **feeling**: the writer must put it in and the reader has to get it out. Thinking and feeling, both must be there, in a put and take relationship. The reader must stop his reading to think, to savor the flavor of the writing, enjoy the artistry, feel deeply, to toy with a beautiful figure of speech or an apt phrase. If you do stop to fully enjoy your reading, down goes your score on the reading test but up goes your reward for reading. And I am for rewards more than scores.

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## READING MATERIALS: RATIONALE AND REVIEW

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Instructional Materials are big business! Witness the association of industrial corporations with publishers and the purchase of educational publishing organizations by their cousins who had limited their activities to other areas. Although huge sums of money have been spent for instructional materials, the market has expanded as a result of new monies available to some school districts for the first time. We who have not spent much time in sections other than metropolitan will find hard to believe the fact that tens of thousands of children actually do not have enough materials from which to learn. I am thinking of not only the economically depressed sections of the country but also so many of our rural areas where either tax money, know-how or concern is lacking. The Federal Government through different titles now is making it possible for school districts to strengthen their programs by providing funds for all sorts of materials. For some this means breaking new ground: for others freeing funds for other things. The net result is larger sums of money for the purchase of materials, and materials for teaching reading will not be slighted.

Competition among publishers of reading materials is keen. Each desires to corner as much of the market as possible. In order to consummate a sale amounting to several millions one company had to demonstrate the superiority of its materials over the competition. This demonstration brings up the question of how we determine the superiority of one set of reading materials over another. Do we do this on the basis of research findings, universally-accepted criteria, judgments based upon personal prejudices, or what? Perhaps a little of each, and in some instances, no real judgments at all.

Although there has been some research involving the use of reading materials, such as studies in which readiness or upper level workbooks were used with one group and not another, or in which outcomes of instructional programs were compared, the total amount is limited. For example, one reviewer found "no major studies of the evaluation of materials of their usefulness"[1] over a three-year period. Another, three years later, summarized but two studies of the types mentioned earlier.[2] As recently as 1965 a third compiler mentioned one study that compared the use of a mechanical device "with regular methods of teaching reading."[3] We have few if any studies which sought to determine the superiority of one set of materials over another. Perhaps from a research point of view what we are asking for cannot be done: that is, separating materials from programs. But I can envision a study in which a given skill is taught and then materials used to determine their effectiveness in strengthening its development. And self-teaching materials offer other opportunities also to ascertain superiority.

Universally-accepted criteria for reading materials? No such things. Specialists in children's literature have suggested guidelines we might follow, but what guidelines are there for choosing one set of instructional materials over another? I suppose if we were to establish any, we would be concerned about such factors as content, interest, format. Of course, the most important factor might be the extent to which our purposes are met by materials.

I would settle for the latter, but experience tells me no such thing. Too many reading materials are chosen on the basis of what we are told about them. Publisher's promotions and claims are powerful influences in determining school sales. I would concede that selection of these bases is no worse than that emanating from ignorance.

Since we don't have much evidence about the worth of instructional materials intended to promote reading development, I will have to rely on my own experiences to assess them. Perhaps some of your own are similar to mine.

## Basal Reader

How do we rate basal readers? Let us consider the old guard first and then evaluate the newcomers. We are all familiar with the typical basal reader with its paper-back pre-primers and one or more hardbacks for each grade level. What are their features? According to the publishers and advocates, these materials deal with activities familiar to many children and based upon their common interests. The selections are graded in difficulty by controlling vocabulary load, density and difficulty of ideas, sentence length and so on. The content includes narrative and expository selections, fiction and poetry and is presented in an attractive format to hold children's attention and promote the development of reading ability.

We are told these features are necessary and desirable. But criticisms have been leveled against these books: the content is unexciting to children, particularly boys, and does not sustain their interest; writing styles with their repetitious and limited vocabularies are of poor literary quality; the selections do not reflect the cross section of American life with its diverse peoples, values and environments; there is a limited amount of subject-matter content with which to develop reading and study skills associated with it.

There is no doubt that some of these criticisms are valid, perhaps not wholly but certainly in part, but my guess is that we apply some of our adult common sense to these materials and draw conclusions that we support strongly with the help of authority. In so far as the unexciting content is concerned: certainly at the earliest stages, if we accept the readers' approach to word identification, there can't be much of any story, let alone exciting ones. Of course, as time goes on and children develop some basic skills, selections can contain more "meat" as well as deal with activities of a less sedentary nature. I am all for appealing to more boys, but I am not so sure the action which some critics want is the diet young children should have. Certainly it shouldn't be the sole fare.

What about poor literary quality? I don't know of anyone who would defend most basal readers on literary grounds. The first books in the series rely on limited vocabulary; such a condition can put a crimp in anyone's writing, Dr. Suess notwithstanding! But once children have developed adequate word-attack skills, they need not be tied down to uninspired writing. With some modifications the writings of our better trade book authors could find their way into the readers. We are beginning to see some changes in this direction already occurring.

Most publishers of basal readers would plead guilty to the charge that these books reflect American middle class attitudes, white ones at that, and do not truly represent American diversity. You are all familiar with the claim that large numbers of children cannot and do not identify with the basal readers' characters and surroundings which are totally foreign to them; that they reject these and as a result are doomed to almost certain failure. Although I personally might prefer to include selections which more closely portray life as many people know it, I am not so sure for example, that it is necessary to give economically and culturally disadvantaged children heavy doses of what they know all too well, or that heroes they read about have to be exclusively of their own kind. I would agree that we need diversity and balance. Here is one area which research might well explore. Some publishers, in reply to this criticism, color a face here and there. What this means to children I do not know. More about this later.

It seems to me that criticism of most readers for their failure to deal with content systematically is valid. With conditions as they are, it is unrealistic to assume that teachers will offer this instruction as children study textbooks and other materials. I would recommend the inclusion of material which is representative of the types of reading we expect our pupils to do. Surely instruction in reading content is basic.

A number of new basic series have introduced significant changes in orthography, word patterns and story settings. The materials through which a new orthography is introduced are quite similar to those with which we are familiar. One basic series that attempts to control sound patterns reads much like its counterparts of the "look, look" variety. A few others could also qualify for criticism on similar grounds. They are not literary or exciting by any stretch of the imagination. But all their worth must be assessed against standards that measure how well children learn to read and how much they desire to read.

Two sets of readers depart from the usual in that one stresses city living and the other the Negro. I would reject any set of materials which delimits a reader's perspective. Of what significance are ideas that are always comfortingly familiar? That we need some does not deny the need for others which are quite different. Do we expect the city child not to know or care about his cousins in the suburbs and rural communities? Do we assume he is a cliff dweller for all times? And a poor one at that? This brings me to the readers which are intended essentially for young Negro children. How are they different? Unlike the series which color an occasional face brown, these books deal with lives of Negro families. Although these families do not own private homes as pretentious as their white counterparts in other series, they do have their plots of grass and cars and do enjoy life in the suburbs. To the children for whom these materials are intended, this kind of life is quite foreign. How different, then, are they from the usual? In color. Will these materials help to produce better readers? My guess is that they won't, but I am prepared to look at outcomes dispassionately.

Some of my comments have been seconded by people in the field. Undoubtedly exceptions to them will be taken by others who feel strongly about basal readers. Until we can devise a better mousetrap I would suggest we strive to improve them. I would take issue with those who say that basal readers have inherent weaknesses which can't be overcome. No matter how attractive they do become, the ways in which they are used will determine their effectiveness. I can foresee a time when it might be possible to dispense with basal readers, when computer retrieval systems make available to us what we want and when we want it and when teachers know what they want and what to do with it when they have it.

### Workbooks

Workbooks may be divided into two classes: those which are designed to be used with a reading series and others that are independent. Whether the workbooks parallel reading programs or go their own way, they contain practice exercises in one or more of the following: readiness, word identification, comprehension, study skills. Independent workbooks tend to stress individual skills (such as phonic workbooks or those intended for upper grades) than cover the wide range found in series workbooks.

One of the problems associated with workbooks is the failure of many teachers to recognize to what purposes they might be put. As I see them, workbooks contain exercises which offer **practice:** in interpreting pictures, in matching letters with sounds, in discriminating between similar words, in using context clues and recognizing word endings, in dividing words into syllables, in reading for details and main ideas, in developing vocabulary, in summarizing and outlining, in drawing conclusions, and so on. Few, if any, offer **instruction** in skill development. Pupils require practice after instruction, some more and others less, and it is possible that a discriminating teacher will find exercises in workbooks that he can use for such purposes.

Teachers as a group prefer to use workbooks rather than prepare their own materials. They argue that they provide for individual differences, save time and effort, contain exercises superior to those which they might devise, free teachers to work with children who need extra help. The critics point to their cut-and-dried format, isolated exercises, mechanical responses, limited content. It would not be difficult to find samples to support each viewpoint.

What position do many of us take? There is nothing wrong with workbooks that we can't correct. I suspect we have been taken in by the claims some people have made for workbooks and then complain that they are not doing the job. Let's first recognize that no amount of time pupils spend with these materials will do them any good if they are unable to perform the tasks required of them. If children are weak in auditory discrimination of consonant blends and the practice exercise requires them to match these blends with pictures, what usefulness will the exercise have for them? Or if a group of children are weak in recognizing the central thought of a paragraph, will an exercise that requires them to perform this task enable them to do so? Recognize workbooks for what they are. Teach first and assign those exercises which give practice in doing what you've taught.

This brings us to weaknesses of many workbooks. On a given page you might find a number of different components, to some of which, perhaps, your pupils are not ready to respond. Or there is an inadequate amount of practice material to which they can respond. You can overcome these weaknesses by removing the pages of different workbooks, cutting some into smaller parts and bringing together sections containing exercises covering given skills. These might be mounted and placed in envelopes for use when needed.

Another suggestion. You can obtain added mileage from some workbooks by taking ideas from their better exercises and applying them to the materials which your pupils are reading. Such practice will be of help to the busy teacher (and to one who needs ideas) as well as tie more closely skills practice to reading activity.

There is another point about workbooks I need to make. Generally, each page or exercise has a stated purpose. A careful examination of some reveals that the exercise does not fulfill the stated purpose. Once again, indiscriminate assignments will lull the user into believing pupils are engaging in and profiting from an activity when in reality no such things are happening. We must know our craft sufficiently well so that we recognize weakness wherever it occurs.

Let's take a quick look into the future. You have just taught a skill lesson to a group of children (to vary routines) who are reading on different levels. You have been working on clues for drawing conclusions. Now you need some practice material. You go to your console, push some buttons, wheels whir, and out of the units that are part of each desk come materials that are just right for each child. As soon as the child finishes the page he inserts it into the machine which indicates the correctness of his responses. If you are seeking oral responses the child's screen lights up, material suitable for him appears and he responds. Each correct response is confirmed; incorrect responses are noted, fresh material provided with oral explanations, followed by new practice exercises. Automatic workbooks of the future!

### Packaged Mixes And Programmed Materials

There are a group of instructional materials which are packaged in boxes. Some contain materials intended for primary grade use; others provide materials for the middle grades, junior and senior high schools. One covers basic word identification, comprehension skills, and rate; another study skills, and so on. The features that promoters of these materials stress are their different levels of difficulty covered and minimal teacher attention required. At the higher levels they are supposed to free the teacher for other tasks.

None of these materials is truly programmed although some publishers describe them as though they were. This fact, however, does not make them self-instructional. What does it mean? Can you take one of these boxes, set your class loose and assume you have an on-going program? From my point of view, no! If you desire your pupils to practice what they have learned, these boxes will help you achieve this purpose. They will not assume the responsibility of providing instruction. They might make your task easier by offering ready-tailored practice materials.

There are a few instructional materials which use programmed techniques, more or less. Two sets of these materials have been written for beginning readers. I find them quite dull in content and design; however, they might appeal to beginners. In so far as their work is concerned, results in producing competent readers as well as eager ones have yet to be established. We should not be prepared to accept data from vested interests until they have been verified. I do know of a tryout in which one of them was found wanting.

There are a few additional materials that follow the programmed design. It seems to me that highly creative efforts might produce instructional materials for teaching some reading skills, if not many of them. Some people feel that many of the higher-level comprehension skills require "talking out" which programming lacks. Provision for audio as well as visual treatments could fill the gaps and surround the learner with "give and take" not presently offered by successive frames of printed explanations, questions and answers. You may be familiar with the experimental program which taught a poem by helping the reader to analyze it. Perhaps more of this type of experimentation will give us insights into how we can get the job done in a meaningful and efficient way. There is still the problem of overcoming impersonal treatment with which programmers have not been concerned but learners are.

### Audio-Visual Aids

Charts, flash cards, games, word wheels, film strips, records, these and more can help you get the job done and make learning interesting providing they are not used indiscriminately and for their own sake. You must ask yourself this question whenever you are tempted by them: Will they help my pupils learn what they don't know? If the answer is in the affirmative the second question should follow: Under what circumstances might I use them? To illustrate what I mean: here is a word game which you know children enjoy playing. What is the relationship between the words in the game and those with which a group of children have difficulty in the reading they do? If none, then that game is unsuitable. You might pattern your own game after it and substitute the troublesome words. But the game is introduced as part of a total lesson, using context, phonic and structural clues to recognize the words, developing rapid recognition of them, and dealing with them again in context. Under these circumstances playing the game is a meaningful, purposeful learning experience as well as an enjoyable one. It is not an end in itself. These comments also apply to the other kinds of instructional materials mentioned earlier.

### Mechanical Aids

Pacers, flashmeters, films. These are used more at the higher levels than at the lower ones since most are intended to promote rapid reading. Unlike the other materials, investigations into their validity have been conducted with elementary, secondary and college students as well as adults. The evidence we have is fairly clear: flashmeters seem to be of least value: films aren't much better; pacers, if used properly, might be helpful if only to motivate. In a summary of the research the conclusion that any gains achieved with mechanical devices might be duplicated or surpassed through natural means was reached. Gadgets are appealing, but we tire of them if they fail to meet our expectations.

There are some new developments in gadgetry which might be promising. One is an instrument which reads words that are typed on tape. Thus a child can see words on cards at the same time he hears them. The other is a viewing device which provides reading instruction through visual and auditory programs. Both might be useful in a skills program of a knowledgeable teacher.

## Summary

We have intimated, if we haven't said, that materials are no better than the teachers who use them just as our physical plants are as good as the staffs who make them. With the exception of materials that actually free us of teaching responsibilities, how useful instructional materials are depends on how well we understand their strengths and limitations. Some of the most simple kinds of instructional materials can be profitably employed to promote reading; on the other hand, elaborate designs, though impressive, won't help us very much. I have learned to be skeptical of claims; in a world of many marvels and much money we need more educators who say: "I'm from Missouri."

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# IMPLICATIONS OF PSYCHOLINGUISTICS FOR COLLEGE READING

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Within the past several decades, structural linguistics and behavioral psychology have evolved more or less independent approaches to the systematic study of language phenomena. This difference in approach is reflected in the kinds of questions to which specialists in the respective disciplines have sought answers. What the linguist wishes to know are the characteristics of the language code and the rules which govern the encoding of messages. To put it more simply, the linguist asks, "Can a speaker say this?"

The psychologist, on the other hand, is concerned with specifying the factors which affect the behavior of the speaker, both in the acquisition and the use of a given language code. He therefore asks, "What variables are operating to cause the speaker to say this at this particular time?"

As Saporta has pointed out, there has been a need for some exploration of the relationship between these two approaches: "The structural, all-or-nothing, deterministic view on the one hand, and the behavioral, more-or-less, probabilistic view on the other."[1] In retrospect, it seems inevitable that some attempt would be made to achieve an integration in those areas of language behavior where the interests of the linguist and the psychologist converge. As far back as 1924, the noted linguist Jespersen said, "psychology should assist us in understanding what is going on in the mind of speakers, and more particularly how they are led to divide from previously existing rules in consequence of conflicting tendencies."[2] Advances in information theory supplied a communications model which aided significantly in establishing the basis for a "first approximation" toward psycholinguistic integration.

The term psycholinguistics has proven to be a rather unfortunate label, despite its popularity. It has been applied indiscriminately to many kinds of research within the poorly marked precincts of "the psychology of language behavior." Linguists have questioned the legitimacy of the term when it has been used to characterize language studies that ignore the findings of linguistic science; and psychologists have been sharply critical of research designated psycholinguistic that fails to take account of basic concepts in behavioral science. It is significant, therefore, that recent efforts to move the definition of psycholinguistics in the direction of greater precision have identified the central task of this newly developed interdisciplinary approach as the systematic study of the acquisition and use of structured language.[3] To define the field in this fashion is to invite some consideration of the potential relevance of psycholinguistics for the manifold tasks of the reading specialist.

The linguist Lefevre contends that "current reading methods and materials reflect little or no acquaintance with the structural linguistic rationale."[4] He might also have pointed out that linguists themselves deserve a large share of the responsibility for this state of affairs. Few linguists have taken an active interest in problems relating to reading: the primacy of language in its spoken aspects has played an important role in relegating reading to a subsidiary status among specialists in linguistics. Reading has not been completely neglected by linguists, however, as witness recent publications by Bloomfield and Barnhart,[5] Fries,[6] Smith,[7] and of course, Lefevre himself.[8] The reading specialist is now happily situated to choose among several linguistic approaches to his subject.

By comparison, psychological interest in reading has been much more extensive and variegated. The complex learning processes involved in reading, visual perception, saccadic movements, vocabulary acquisition, meaning and association, the development of audio-visual aids in the improvement of high-speed recognition responses—these and many other topics have engaged the attention of psychologists. Indeed, it would not be entirely inaccurate to say that most of the problems which concern the reading specialist are psychological in nature, whether or not they are self-consciously identified as such. However, the methodology employed in various approaches to these problems has not concerned itself **rigorously** with language behavior **as behavior.** It is in this respect that psycholinguistics differ significantly from previous approaches: that the essentials of a sound psycholinguistic approach to reading must not only incorporate the valid findings of structural linguistics, but must also be based upon principles derived from experimental analyses of the functional properties of behavior. Perhaps this contention can be supported by reference to two promising areas of research.

In 1961, Kirk and McCarthy[9] published a new test which they described as "an attempt at diagnosis in the psycholinguistic field."[10] The Illinois Test of Psycholinguistic Abilities (ITPA), as they called it, is of considerable interest, for it represents a pioneering effort to construct a diagnostic instrument according to basic concepts of language behavior generated by psycholinguistic research.

The conceptual structure underlying the ITPA is based on two complementary theoretical models of language behavior. The first of these was supplied by Osgood's "general behavior model"[11] which postulates two stages and three levels of organization between stimulus and response in the complete behavioral sequence. According to Osgood:

> The first stage is what I shall call decoding, the total process whereby physical energies in the environment are interpreted by an organism. The second stage is what I shall call encoding, the total process whereby intentions of an organism are expressed and hence turned again into environmental events. The three levels of organization are assumed to apply to both sides of the behavioral equation, to both decoding and encoding: (1) a projection level of organization, which relates both receptor and muscle events to the brain via "wired-in" neural mechanisms; (2) an integration level, which organizes and sequences both incoming and outgoing neural events; and (3) a representation or cognitive level, which is at once the termination of decoding operations and the initiation of encoding operations.

The second model is that provided by Wepman and associates[12] and derives from clinical studies in language pathology. According to this language model, three levels of function conceptual, perceptual, and reflexive—are assigned a locus in the central nervous system. It should be emphasized that Wepman's postulates are firmly anchored in clinical observations of patients with various types of language disturbance.

In the working model for the ITPA, certain features of the two preceding theoretical models are combined within three dimensions: (1) channels of communication (auditory input, vocal output, and visual input, motor output); (2) levels of organization (automatic-sequential and representational); and (3) psycholinguistic processes (decoding, association, and encoding). This schema is given correspondence in the constituency and organization of the nine subtests in the battery:

**Representational Level**

1. Auditory Decoding
2. Visual Decoding
3. Auditory-Vocal Association
4. Visual-Motor Association
5. Vocal Encoding
6. Motor Encoding

**Automatic-Sequential Level**

8. Auditory-Vocal Sequential
7. Auditory-Vocal Automatic
9. Visual-Motor Sequential

The numbers in the lists above refer to subtests and serve to indicate the channel, level, and organization. Thus, test number 1 (auditory decoding) measures decoding via the auditory channel at the level of representation.

The end result of this model and test construction, as Kirk and McCarthy have stated, is a diagnostic instrument which yields a profile of abilities and deficits within the area of psycholinguistic processes. In comparison with many of the standard psychometric tests which purport to deal with "verbal ability," the ITPA is a much more sensitive and discriminating instrument. More important, it yields test data of a kind that leads directly to suggestions for remediation.

In a subsequent investigation of the ITPA with reading disabilities in partially sighted children, Barbara Bateman[13] reported positive correlations between reading achievement and scores obtained on the three ITPA subtests at the automatic-sequential level. The author suggests that "minimal sensory intake may be sufficient for near maximal central efficiency, as shown by the fact that the partially seeing children (exclusive of the severely handicapped and/or legally blind) did not necessarily show a visual channel psycholinguistic deficit." The implications of this suggestion for special education are immediate and profound.

A second area of provocative research involves the application of operant conditioning procedures to the teaching of reading in young children. The principles on which this type of research is based have been derived from functional analyses of behavior under both experimental and naturalistic conditions with human as well as infra-human subjects. The key element in establishing stimulus control over behavior, as demonstrated by an impressive accumulation of empirical data, is the process of **reinforcement**, i.e., the nature and magnitude of the reinforcer and the schedule according to which it is administered.

In their comparison of speech and reading development, Staats and Staats[14] remind us that "for everyone, learning to read is accomplished only with great difficulty in comparison to the acquisition of speech under the control of other stimuli." Speech acquisition is gradual, learning sessions occur intermittently throughout the day, new objects are introduced over a period of time measured in years. Even more important, strong sources of reinforcement are involved. Reinforcement is individually applied, in most cases immediately following the speech behavior involved.

In contrast, the onset of training in reading is sudden rather than gradual. Intensive learning periods can also present aversive characteristics. Azrin,[15] for instance, has shown that discriminative stimuli tend to acquire aversive properties following an extensive period of "working" in the presence of those stimuli, despite the fact that the responses themselves are reinforced. Staats and Staats point out that it is reinforcing to "escape" the school situation when it acquires aversive characteristics: "Any behavior that removes the child from the aversive situation will be strengthened."

The social psychologist Kurt Lewin once observed that there is nothing more practical than a good theory. The principles of operant conditioning and reinforcement theory have been validated in countless experiments and in the several instances where they have been applied to reading, they have yielded significant results. A single illustration will have to suffice.

Using four-year-old children as subjects, Jeffery[16] tested the facilitation effects of relating simple motor responses to stimuli which differed in spatial (left-right) orientation. The children learned to press buttons oriented in the direction indicated by the stick figures used as stimuli. Subjects in the experimental group quickly learned the appropriate discriminations. Said the author:

> At a practical level, these data can be interpreted as having fairly direct implications with regard to specific instruction, such as teaching reading. Davidson (1935) has indicated that children are not normally capable of discriminating "b" from "d" until 7½ years of age. The present data indicate that a child incapable of performing this discrimination at a given time can be taught it very quickly, even as early as four years of age, if conditions are properly arranged.

In a later study, Staats and Staats and associates [17] were able to establish recognition vocabularies of more than a dozen words in a group of four-year-old subjects within a remarkably short period of time.

Questions naturally arise with regard to the generality and utility of such experimentation. Is it possible to employ operant conditioning procedures with older and more sophisticated subjects, or are we compelled to restrict their use to children? Can we hope to attain comparable precision in stimulus control of high-speed recognition responses to complex textual materials? What is the optimum arrangement for stimulus presentation? What is the most effective reinforcement schedule?

If psychologists seem to respond to every problem with a montonously reiterated demand for more research, about all one can say in rejoinder is that a respect for hard data is one of the stigmata that identifies behavioral scientists as an occupational group. At any rate, the questions posed above require empirical answers. Fortunately, they seem to be questions of modest and manageable proportions.

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# NEEDS OF FUTURE TEACHERS OF READING

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I should like to open with the unqualified statement that you as teachers of tomorrow, will be living in the most thrilling period of teacher history. You will be emerging into a world of accelerating change, a world beset with problems, a challenging and stimulating world, a very different world from that in which we lived even five or ten years ago. Recent change has been swift and startling and it has plunged us into the most serious problems in the history of mankind. Unexpectedly, however, this avalanche of problems is flinging out many new challenges to those engaged in the teaching of reading. In fact because of these problems reading has suddenly leapt into a new magnitude.

The key solution most frequently proposed for solving the problems of society is education and reading is basic to education. Education cannot proceed without reading, hence there is a compelling new objective to improve reading. This objective is lifting the horizon of reading far above its established bounds, and revealing vast new frontiers. The door to an exciting new epoch in reading would seem to be not only ajar but swinging wide open, and the reading teacher walks proudly through the portal.

Let's briefly consider some of the influences and problems that are shaping reading instruction at the present time, and that will influence our future teaching of this skill.

First, there is the accumulation of knowledge. We are living in the midst of an explosion of knowledge — social, scientific, ideological, economic, and political. This vast expansion of knowledge is changing continuously, and will undoubtedly continue to change at ever accelerating rates. We realize now that what a child is learning in school today or what an adult learned in school yesterday, may be of little or no use to him tomorrow, metaphorically speaking. Therefore if children in school and adults in present day life are to keep in step with our ever-changing age they must be able to read well and with discriminating understanding in all fields of endeavor, not only while in school but in life. So it is that these expanding and changing accumulations of knowledge are placing heavy new responsibilities on those who teach reading at all levels.

The technological revolution is affecting reading instruction also. Technology is rapidly replacing man power with machines. Education will be necessary in holding the jobs of the future and education cannot proceed without reading competency. Furthermore, the entire population increasingly will have to read technical or semitechnical materials. All will be consumers of products of this ever-advancing technology and as such they must read to make decisions as to whether or not to buy some of them, how to use those that they buy, how to live effectively with those not within their control. This situation in technological developments opens up an entirely new frontier in the field of reading.

As for international influences, perhaps, the most terrifying problems are those stemming from inter-relationships amongst nations. These problems will undoubtedly prevail for a long, long time to come. Today we don't know what we are preparing a child in the schools for. One thing is certain, however — that his life is going to be tied in strongly with the lives of people in other countries. He must be knowledgeable about all parts of the world. Students the world over as well as adults will need to read more history and more about current events, and as teachers of reading, we need to find still better ways of helping these people not only to read history and current events but also to interpret and evaluate these materials critically.

So much for future needs in reading arising from the international situation. We need also to consider the new needs in reading arising from our own national trends and problems.

The culminating influence of this period in our country is governmental concern and support of education. This concern provides not only encouragement for improving reading instruction but also financial aid for implementing such improvement.

And of course back of this governmental interest is the challenge to the United States from others who are seeking national supremacy. Ever since Sputnik all productive activities in our country have been geared to a new high. As an offshoot of this larger motive and tempo, extraordinary effort is being made to teach reading better in a shorter time. Numerous new methods and materials are burgeoning forth. Authors and publishers are directing an all-out effort to produce materials that will enable us to teach reading more effectually in a shorter time. There is i/t/a, the linguistic approach, multi-racial approaches, words in color, programmed instruction and so on.

We need to keep abreast of these new developments, to familiarize ourselves with them, to try some of them out; for in so doing we will derive new insights, but withal let's not jump at the conclusion that just because something is new that it is going to solve all our problems in reading. There never will be one panacea in reading.

Mention should be made of recent attention being given to the culturally disadvantaged. As a result of this interest, including Head-

Start projects, no doubt in the not too distant future the public schools will embrace classes for all three- and four-year-old children. This will mean that the kindergarten curriculum will have to be revised. And accordingly curricula in the first grade and all along the line may need to be revised. Teachers of reading need to alert themselves to such possibilities.

Another need arising from our national situation is the problem of future joblessness resulting from advances in automation. Not only thousands but millions will be jobless in the future unless they are retrained. They must be taught new skills, they must acquire new knowledge. They must learn to read.

Then there is the problem of poverty. Thirty-five million people in our country fall within the poverty category. Education must be provided to lift these people from their abysmal pits of indigence.

All tied in with the problem of joblessness and poverty is the problem of integration. New education effort is necessary if this significant forward step in our society is smoothly implemented.

In the expansion of educational services to meet these problems, there will be a new diversity in the personnel with whom we will be working. With this greater diversity in ability, age, and background of students we need to loosen up our classroom organization better to meet individual needs. This movement is already under way. Teachers are experimenting with the Joplin plan, the multigrade plan, the ungraded plan and individualized instruction. Two of the most recent plans which have considerable promise are team teaching and the Trump plan of flexible scheduling.

The best guarantee of reading improvement in all its ramifications is, of course, the better preparation of teachers. As a result of the new demands and interests, the outlook for the future in regard to teacher preparation is bright.

Teachers will need to take more courses in reading, and colleges will need to offer more courses in reading. Increasingly college and in-service courses will integrate lectures and reading with observation of master teachers of reading and with actual classroom practice. Requirements for teaching reading will be raised. All states eventually will require certification for classroom teachers of reading and for reading specialists.

These, then, are some of the improvements in teacher preparation to which we may look forward in the years ahead. These improvements should serve as useful mediums for helping us to meet the great welter of reading needs with which we will be confronted.

I shall now attempt to summarize the needs of future teachers of reading which I have discussed.

1. The status of the teacher in society will be increasingly recognized and rewarded. Good teachers of reading will be valued highly, and the demand for reading specialists will probably be greater than the supply for a long time to come.

2. Teachers of reading must keep in very close touch with national and international problems and trends, and mesh their lives and teaching in with needs of the changing times.

3. Since curriculums will change to meet emerging needs, reading teachers must keep alert to modifications in different curricular fields so that they may teach reading skills needed in implementing new emphases in different subject areas.

4. Requirements for preparation will be raised. Teachers will need to take more college and in-service courses.

5. Research will increasingly reveal new and better methods of teaching. Teachers of reading will need to keep abreast of this research and apply findings that will improve their instruction.

6. Since teachers will have greater diversity of personnel in their classes they must exert themselves more than ever before to adjust reading instruction to individual needs.

7. Teachers of reading may be called upon to teach older students than those usually in school — adults, youth, drop-outs, and they will need to learn how to work differently with these people than with school children.

8. Teachers may be asked to do some teaching of reading in out-of-school hours to accommodate those who can come only evenings and Saturdays. They should be ready to accept in so far as their time and energy permits.

9. Teachers will be working with increasing numbers of individuals who find it difficult to learn the reading skills. This will require patience, ingenuity, and empathy.

10. Teachers of reading will have unprecedented opportunity for creativity. New subject matter, in keeping with evolving needs, must replace or be added to some of that which is rapidly becoming old and obsolete. New materials must be created, new methods must be devised.

In these and in other ways our fast moving civilization will affect the teaching of reading regardless of the aspect of instruction or age level of students with whom the teacher is working.

I assume that all of you are teachers of reading in one capacity or another. I rejoice with you in the rich opportunities and the personal satisfactions that await you as reading teachers of tomorrow.

Abstract

# PREPARING ENGLISH TEACHERS TO TEACH READING

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Today's preparation of English teachers to teach reading is largely instruction by word. It also must become instruction by deed. Teachers, like other students, learn more from what they do than from what is said to them.

More than additional topics for study, today's English teacher needs change in the modes of his preparation to teach reading. He needs: a) a program of studies suited to his unique, self-realized needs, b) diagnostic instruction, c) participation in flexible group and independent instruction, d) opportunities for inductive and deductive learning, e) differentiated assignments, and f) measurement of his learning in terms of his behavior. For teachers' classroom behavior tends to be more like the behavior than the words of the teachers who taught them.

The content of this preparation must focus on what English teachers propose to teach. It must not be a question of omitting something important to teach reading. It must be a matter of providing instruction in literature and language through promoting improved reading by all students.

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Abstract of Research in Progress

# AN EVALUATION OF THE MORPHOLOGICO-ALGEBRAIC APPROACH TO TEACHING READING TO ADULT FUNCTIONAL ILLITERATES

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Two hundred adult illiterate students from the inner-city of Cleveland, Ohio were studied in their contrast and experimental groups to determine the efficiency and effectiveness of the Morphologico-Algebraic approach (Words In Color) compared to traditional methods of teaching reading. The mean age of these students was 41 years, the I.Q. was 79. All had originally come from the south except for 11 who came from Ohio, Utah, Pennsylvania, Cuba, or Yugoslavia.

Ninety-seven of these students formed the contrast group. They had experienced and certified teachers. But only two of the five teachers of the 103 experimental group students were certified to teach. Of the remaining three teachers, one had a masters degree in sociology but no teaching experience, one other teacher had three years of college and had taught kindergarten for ten years, and the other had two years of college and had no teaching experience. None of these teachers had any familiarity with teaching beyond a three-week training course and three weeks of class experience in teaching Words In Color.

All students were given the following pre- and post-tests: California Reading, Wepman Auditory Discrimination, Functional Visual tests comprised of fusion, phoria, and cheiroscopic tests. The Army Revised Beta and the Pseudo-Isochromatic Tests were also given. The Durrell Oral Analysis was given as a post-test to all students and as pre- and post-tests to the experimental group.

All classes were observed, and the students from the contrast and experimental groups with the greatest and least amount of gain were interviewed. The interviews included information relating to family social structure, early education, aspirations, reactions to their adult class experience, and verbal and non-verbal projective tests.

Statistical tests have been used to determine whether or not there is a significant statistical difference between the achievement of adults who learned to read using Words In Color and adults using traditional methods. Methods to control the independent variables have also been applied.

Processes and learning theory inherent in the two reading methods have been studied and the conscious and unconscious personality factors as revealed in the interviews have been informally studied for clues which might further explain the test results and describe the impact of the adult class experience upon the learner.

# FACTORS IN THE HOME BACKGROUND AND READER SELF CONCEPT WHICH RELATE TO READING ACHIEVEMENT[1]

Clay Adams Ketcham
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This study was undertaken to determine which of selected factors in the home background and Reader Self Concept are significantly related to the reading achievement of tenth grade students. It was hypothesized that there are certain factors in the home background and Reader Self Concept significantly related to reading achievement.

A questionnaire containing 50 questions was devised to assess the home background of the student. Questions on parent occupations, interest in music, trips, museums, discussions, and sports were included. The Reader Self Concept questionnaire containing 50 questions was devised to assess educational and career aspirations, grades and satisfaction with grades, interest in reading, music, trips, and discussions and opinions about college and reading.

A pilot study[1] was conducted in the Phillipsburg, New Jersey, High School with seventy-five selected tenth grade students for the purpose of determining the response of tenth grade students to the questions, to test the wording of the questions, and to eliminate the questions which obviously failed to discriminate. As a result of the pilot study, a final form of the questionnaire emerged with 39 questions on home background and 40 on Reader Self Concept.

The final form of the questionnaire was administered to the entire tenth grade class of 615 students at the Easton Area High School in Easton, Pennsylvania. Reading achievement scores for these students were gathered from the student records. A small number of students were eliminated from the study because of incomplete records, incomplete questionnaires, I.Q.'s below 75 or reading grade level below 3.0. The final sample included 582 students, 303 of whom were boys and 279 of whom were girls.

A Chi square analysis was made of each item on the questionnaire and its relation to reading achievement. The home background questionnaire was reduced to 35 quesstions by combining all questions on magazines in the home, except love and detective stories, into one question, and by combining the two questions on the newspapers in the home into one question. Contingency coefficients were calculated for all questions significantly (beyond .05) related to reading achievement to determine the strength of the relationship.

In this study, 26 of the 35 selected home background factors were found significantly (beyond .05) related to the reading achievement of the students in this sample. The factors which are most related to reading achievement, in this sample, are the following: mother's use of the library, the number of newspapers and quality magazines in the home, and the father's job. Other factors significantly related to reading achievement are visits to places of historical interest and museums, parents' discussion of the news, philosophical ideas, and what they read, classical music in the home, the giving of books as presents, and parental satisfaction with the amount the student reads. Negatively related to reading achievement is the amount of TV viewing of parents.

Of the 40 selected Reader Self Concept factors, 27 were found related to the reading achievement of the students in this sample, significant beyond the .05 level. The factors in Reader Self Concept most closely related to the reading achievement of the students in this sample are the following: grades, grade aspirations and expectations, educational and career aspirations, satisfaction of the student and parents with grades and career aspirations, satisfaction of the student with family encouragement for school work, student and parents who buy books, student's belief that he should borrow money for college if there is no other way to go. Negatively related to reading achievement are the following factors in Reader Self Concept: belief that college is only for those who can afford it, belief that girls don't need college, belief that reading is a feminine occupation, and belief that only eggheads like to read.

Based on the above findings, the following general conclusions appear warranted:

1. A home environment most apt to be associated with good reading achievement might be described as one where both the father and mother go to the library frequently, read books, especially those connected with their work, buy and read quality magazines and newspapers, buy books for themselves and their children, enjoy classical music, go on trips to historical places and to museums. The father, and oftentimes the mother, are engaged in professional, managerial, or technical work. The parents are satisfied with the amount of reading their children do. Parents use television somewhat sparingly, but do not appear to restrict their children's television viewing.

2. Students with high reading achievement are most apt to have the following factors present in their Reader Self Concept. They will receive good grades, feel that they should receive good grades, and will want to receive good grades. Their parents will

also expect them to receive good grades. Students who are high achieving readers will plan for post high school education, generally a four-year college or a technical school. They expect to find their careers among the professions, in a technical job or in a managerial position. Their parents are satisfied with their educational and career goals and they themselves are satisfied with their family encouragement for school work. They discuss news and philosophical ideas with their parents, share trips to museums and historical places. High achieving readers value college enough to believe that they should borrow money if they have no other way to go. They do not believe that girls don't need college nor do they feel that reading is for eggheads or a feminine occupation. High achieving readers in the tenth grade are not interested in getting married in the next year.

### Reference

1. Copyright by Clay A. Ketcham. The complete study is available from University Microfilms or from the author.

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Abstract

## PREPARATION FOR TEACHING READING IN SPECIAL EDUCATION CLASSES

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Increasing demands for appropriate instructional services to previously neglected children require corresponding revisions in professional attitudes, knowledge, and competency. Exceptionality should not be equated with exclusion, nor should special be equated with different. The specialness of special education resides in its **specificity** to the educational needs of the children for whom it is intended rather than in any inherent uniqueness of material, equipment, or procedure **per se.**

The main task in preparing prospective teachers for the realities of their profession lies in the areas of (1) developing sensitivity to and acceptance of the broad scope of their future responsibilities, and (2) developing adequate instructional skills. Among the latter are the conceptual, technical (i.e. materials and methodologies), and managerial aspects of instruction. The increasing knowledge about the developmental and learning possibilities of handicapped children imposes upon teachers higher expectancies of sophistication, judgment, and instructional competence than has ever before been contemplated. No monolithic set of procedures or materials, no single system of reading instruction so far devised, can fully accommodate the variations or urgencies which characterize the needs of children, particularly those whom we call exceptional.

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# PREPARING ELEMENTARY TEACHERS IN LINGUISTICS

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The bulk of a primary teacher's energies is spent grounding the students in the language arts curriculum, that is, in the development of oral-language skills and the acquisition of basic reading and writing skills. To a linguist, the most striking feature of textbooks and manuals prepared to guide the teachers in this essential task is the amorphous and misleading picture of language that the authorities present. What we have come to know about the nature of language, e.g., its basic design features or how it changes through time, is rarely touched upon. The English language is discussed, yet not as a system, but in fitful remarks on how to improve a child's use of it. Sometimes a technical term from linguistics like phoneme will be used, but without a rich enough exposition for even the most diligent reader to grasp what the term represents to a linguist. Unfortunately, our elementary teachers usually approach their work with hardly a notion of how a language works. Given their responsibility, they could only benefit from instruction in the linguistics of English. Perhaps, from their young students' point of view, they would not become better teachers, for their methods and basic content might not change as a result of such instruction. However, from their own point of view, the teachers might more clearly define their goals, might better be able to judge language art materials in detail, and might find more reason in their methods if they had a firm grasp on how spoken English works and how it is represented in our writing system.

One of the tasks of an elementary teacher is guiding his students in expanding oral language skills. He hopes that they will become more poised when speaking, focus on a subject, say what they want to say, and will avoid expressions and pronunciation that are considered substandard by educated speakers. In their role as authority on what is acceptable in speech, however, teachers are not well prepared to make reasonable judgments about it. This is not to say that they speak bad English, or anything of the sort. The model that they present their students is a good one. The difficulty is that they do not really know how they actually say what they say because they have not looked at English grammar and phonology as a system and because they have not explored in detail the notion of what makes an expression substandard. In textbooks they are presented with only fragments of their language that are labeled unacceptable. In a recent book on elementary teaching, for instance, there is a short list of words given along with a pronunciation that, according to the text, "varies with the standard." Among them was kin for can. If he listens to himself, a teacher realizes that even in his best speech he says /kin/ for can, just as most other Americans usually do in a sentence like the following. How can I take seriously a text that suggests putting formal speech in the mouth of a six-year-old? With some solid training in the English sound system he would hear that there is systematic alternation in the pronunciation of what we spell c-a-n when it is the modal auxiliary verb. Roughly, at the end of clauses, including sentences, as in I think I can or I can, I think, it is heavily stressed and said with the vowel /ae/: in the middle of a verb phrase such as I think I can find out, it is only weakly stressed and the vowel is something like /i/. This kind of alternation is systematic for other modal auxiliaries, too:

I think I could. I think I could do it.

I think I would. I think I would do it.

The grammatical function and the position of many words in the stream of speech determines the pronunciation of many words in a language, yet few teachers seem to be aware of this kind of variation.

Pronunciation also varies, like grammar and vocabulary, along another dimension not always made explicit to teachers, although they certainly respond to it as users of the language. That is, circumstances and one's hearers will determine how a speaker will pronounce what we write c-a-n. Having just been elected to the school board, you might gravely say in your public statement, "I think I can do it," with a careful /kaen/, a performance in violation of the positional rule given above and thus different from when you have just been challenged by a ten-year-old to say antidisestablishmentarianism backwards. The notion of what has been called style or functional variety, variation by circumstances, has importance for the elementary teacher as he guides his students, since part of oral-language skill is matching style to circumstance appropriately. One of these styles, incidentally, is the formal style that comes with literacy. He can better make policy on speech improvement with a sliding scale for judging what is right and wrong in grammar and pronunciation. Our stereotype of the teacher who concentrates on substituting may for can, striking out ain't and reconstituting a lost "g" in singin' (note that you cannot say /sinin/ for singing) is giving only superficial guidance unless he realizes how his "corrections" fit into the entire system of his students' language.

These points are not irrelevant to the elementary teacher's task of teaching beginning reading. He often urges his students to read orally in a style appropriate to the material: "Now read it the way Dick would say it." Some oral reading errors by children are adjustments of the written stimulus to what they ordinarily say, e.g., He can't play for He cannot play. Moreover, that even a mature speaker of English, speaking a regional variety, changes the way he says a word in a sentence according to the structure of the sentence and according to the moment is usually overlooked in discussions concerning the relation between spoken language and writing. Our most formal style in English is that which is most closely represented by the spelling: in the formal, deliberate pronunciation of I think I can do it, c-a-n has /ae/, a usual correspondence of the letter "a." An elementary teacher is presented with the sounds of English almost in isolation; rather than in sentences, the exemplifying words are given in lists, to be read off clearly with heavy stress. He is given only a shallow statement on relationship between letters and sounds in isolation or in formally pronounced words in order to prepare him for teaching word analysis skills. If the teacher does attempt to determine the match between spelling and running speech, he can only groan about how badly the English language is spelled, as tradition has taught him, for his usual speech for every day affairs in the classroom is not formal eulogy style. As for his students' running speech, they, being illiterate, have not had much experience with formal style. They speak close to the way their teacher does on weekends.

An outstanding example of the difference between how formal and informal styles of pronouncing words are represented in the writing system can be cited at the points where we write "t." When reading in formal style, if you see a letter "t" you will usually say [t] or something close to it. On the other hand, in more informal speech,

/t/ does not everywhere sound the way it does in the word Timbuctoo. Linguists can give you statements on the conditions for the variant pronunciations; I shall merely list a few examples. Many Americans do not make a distinction in speech between kiddie (car) and kitty (cat): between (the) winners (of the playoffs) and (two) winters ago. Even if they do, the distinction is not of the same consonantal quality as an Englishman's. The sentence "I ate at Pat O'Neill's" has a set of quick flaps of the tongue. "They ate right" has glottal catches. Again, no "t sound" may show up at all in He rests for a second or He can't even walk. (Note that the difference between positive and negative is the stress and vowel quality of can in such a sentence.) And so if you would like to point out the lack of fit between speech sounds and spelling, your job is even easier if you choose an informal style of pronunciation. That there are acceptable differences in style that relate differently to the writing system is a point that is not explicitly passed on to teachers.

But ignoring the very great difficulties in trying to match letter for sound is not the worst. Ignoring the patterning in the phonology of English and much of the patterning in the spelling system leads to exaggerating these difficulties. Actually, there are many good things to say about our writing system. One of them, of course, is that it is supradialectal and suprastylistic: it is basically alphabetic, but stands for the pronunciation of no one in particular. Besides, there are many orthographic conventions that with practice and an eye for some exceptions we master, such as the alternation between "i" and "y" according to position in words like day:daily ; happy:happier : magnify:magnification, or the function of "-e" in teeth:teethe, or the function of the doubled consonant in diner-dinner. And although one letter like "a" may have many correspondences in sound, final "a" regularly corresponds to /ə/, as in orchestra and umbrella: /ae/ does not occur at the end of English words.

The tradition represented in many teacher's guides, moreover, tends to overlook certain regularities that are not evident from simply listening to sounds and looking at strings of letters. We must investigate the linguistic system more deeply. For example, the letters "-ed" stand for different sounds at the end of different verbs: in coasted we hear /id/: in crashed we hear /t/: and in bruised we hear /d/. But we do not suggest that we spell the past tense suffix according to the way it is pronounced. For one thing, "-ed" visually signals past tense by one form, that is, those two letters. There is some degree of fluency in which there is nothing like sound between the visual stimulus and the registration of the meaning "past tense." Moreover, no one, including six-year-olds, has any trouble pronouncing the past ending correctly, if he knows that it signals past, since for the most part the ending is determined by what groups of consonant sounds are permissible at the end of English words. Voiced sounds tend to clump together; therefore /d/ follows the voiced /z/ at the end of bruised. Likewise, voiceless consonants stand in groups; therefore /t/ after /š/ in crashed. But /td/ or /dd/ do not appear at the ends of English words. They are always separated by a vowel, thus coasted. Probably the spelling "-ed" is as good as any to represent the suffix. That such a unit having a core of same meaning is spelled the same in spite of some differences in pronunciation is a regular principle underlying a great deal of the English spelling system. To spell a word or a morpheme the same in all occurrences, even if regular sound-spelling correspondences are upset, is a working principle of the people preparing new orthographies or reforming old ones in other parts of the world. Listen to the vowels in photograph:photography : horizon:horizontal. Spelling these words more regularly, that is, on the principal of one sound, one symbol, would obscure to the eye that these words are related to one another. We can also mention the variations in the pronunciation of can at this point.

I am convinced that elementary teachers can benefit from the substance of linguistics of English. Here I have dealt primarily with examples from the phonology in an attempt to point out that learning simply a list of the sounds of English is not enough. How the sounds pattern each to each within words and across words, how they vary within a single person's speech and from one area to the next, how they relate to the grammar of the language are important to the person who deals with English professionally. In their role as authority on good use of it, teachers must be aware of the source of their authority and have the knowledge necessary to making judgments. One necessary notion here is the sliding scale on which to judge correctness. As teachers of reading and writing, they must realize that the relationship between spoken language and writing is not simple, but certainly not random, that one must look beyond the surface of each to find regularity. In order to grasp enough about the way English works for it to become useful, a short chapter in a long book is not enough. To learn some linguistics, one must do linguistics. May I invite elementary teachers to do some linguistics. Hopefully, a knowledge of the linguist's point of view on language, the methods and the frameworks of analysis that he uses, and the results of his analysis can provide the elementary teacher with greater rationale in making careful plans for teaching as well as daily split-second decisions.

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# A READING PROGRAM FOR GIFTED COLLEGE-BOUND STUDENTS

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When asked to talk on this subject, I recalled one of those experiences that prompt our saying, "I wish I had said that! The situation involved one of my gods, Frank Hurburt O'Hara, Professor of Drama at the University of Chicago. A class was debating the source of George Bernard Shaw's creativity. The discussion resolved itself into a dialogue between two students, with a bright young man's summation that went something like "Why, Shaw's maternal grandfather was a highly talented person; and Shaw's creativity is merely an instance of mutation." To this pronouncement, Professor O'Hara said, shaking his head, "People, I have led you way beyond myself." That is what I wish I had said. That is the role of the teacher, to lead students beyond himself—especially the gifted.

Any program for any student, gifted or not, should not be hamstrung by a teacher's deficiencies, professional or personal. Also a program for superior students should be marked by the generally accepted feature of any worthwhile program: breadth and depth. It is the opposite of the exaggerated but unfortunately actual case of the Springfield, Illinois teacher who proclaimed that "My students read only sixth-grade books." Asked what comprises sixth-grade reading, she replied with authority, "Those books on the shelves in my classroom."

Because of the spate of student interests, a teacher cannot be expert in all his students' interests, and anyone who attempts to play such a role frequently looms as a phoney in the eyes of his proteges. However, a teacher should be a clearing house for students in their varied interests. The majority of secondary teachers are perforce too specialized to make unaided a reading list pertinent to all the interests of all their students. To help students excavate to the depths of their capabilities, curiosities, and concerns in many categories, a teacher can look to such guides as **Good Reading** (19th edition, Mentor Books, 1964); **Books for You** (Washington Square Press, 1963); **The Lifetime Reading Plan** (Avon Books, 1960); **A Guide to Science Reading** (Signet Science Library, 1963). **Paperbound Books in Print**, published monthly by the R. R. Bowker Company, is another source for reading lists.

Identifying the gifted student[1] is of great importance, of course, to avoid pressures and injury to those not capable of carrying work for the better equipped. But our emphasis in this session is on the effort to help ourselves as teachers help that "top 25 percent of high school graduates, half [of whom] do not finish college."[2]

The atmosphere of inquiry that ideally characterizes any learning situation is especially pertinent to teaching the gifted or talented. Bright students like to look, search, and dig. As Freehill puts it, "Able students . . . may not neglect the 'know-why' for the 'know-how'."[3]

Any program for superior students should have as its substance accuracy and technical sophistication. Even the college-bound student who will go into Liberal Arts, Letters, or Humanities will find himself in courses of mathematics, history, and science. Facts in these fields are so essential to thought in general that depth in them is not likely to produce narrowness in the capable student. Accuracy and technical sophistication do not detract from or impede the individual's development of cultural understanding, sensitivity and reflective powers. In fact, they contribute to these ends. The converse applies to the college bound science student and the arts.

It is easy because of inertia and fatigue, resulting from heavy teaching loads, extracurricular duties, etc., for a teacher to lower requirements and standards. It is this condition that brings many a student—especially the brighter one—to college for that traumatic experience of defeat, because he hasn't learned how to learn. In Terman's work, you recall that one of the most common explanations given by the gifted students whose grades were mediocre or below passing was that in the grades and high school they had made high marks without doing any serious work and that in college they underestimated the amount of work necessary to "get by."

We do know that successful students are most realistic in self-estimates as far as standards are concerned. Such studies as Pauline Sears' well-known report assure us that gifted student can be directed to develop consistent and realistic standards for themselves.[4]

To continue from these basic precepts, let's look to three tools needed if the gifted student is to suceed. They are (1) communication, (2) reading, (3) study techniques.

As mentioned earlier, gifted students should have a wide range of subject matter because of the demands of college. Such coverage is necessary also for the student to be able to communicate his knowledge. Students inept with symbols, for example, will be handicapped in formulating ideas, stabilizing memory, giving facts, or suggesting subtle relationships in the sciences. Those with limited skill in mathematical communication are incompetent to observe electronic data or even to evaluate modern philosophy. The importance of clear, complete, correct speaking and writing in communication needs no comment.

Gifted students read voluminously, but there is evidence that many of them do not read efficiently. Many of them lack reading skills. It is easy to bypass teaching such skills when we are dealing with a student who is reading much more than his more average associates, or if he is maintaining a high scholastic record, or if he reflects a wealth of knowledge in conversation. His college experiences require that he read for exact information, that he skim or spot particular bits of information, that he analyze a point of view. The gifted college-bound student needs instruction and practice in reading toward various ends. Improvement in rate alone can be a marked benefit. The difference between a 30-page assignment in high school and the 150-page assignment is apparent. Yes, the first is for the next day, whereas the college student likely has two days for the 150 pages.

This difference in class schedules and routine brings me to the third tool: study techniques, with the stress on the economical use of time.

At the beginning of their senior year, give a batch of bright students a compact ten- to fifteen-hour study skills course in something like two weeks, and I believe that practicing these skills the remainder of the semester or the year in the reading program they will sense the purpose of the study.

A course in study skills should include something on the psychology of learning. When students understand that motivation is easy to produce but hard to maintain, they can be helped to set more immediate goals in order to sustain motivation. They should be made aware of the part reward plays in learning. They can learn how practice and review affect learning and how freedom from interference while studying can make their job easier.

Students' study habits have changed almost visibly when they see that learning, not just reading to pass courses, is dynamic, that in learning we go from the known to the unknown, from the easy to the difficult, from the simple to the complex. Textbooks become a new tool for students when they are cognizant of the part that vivedness plays in learning. Charts, maps, graphs, illustrations in texts are no longer "so many pages I don't have to read." They see that these visual aids clarify reading matter. As they apply the whole-part-whole method to various study situations and as they understand that primacy, repetition, intensity, and recency are factors in learning, they can approach their study with more understanding of what is occurring. It is the "know-why" again.

Another phase of efficient study, and one whose effectiveness can be demonstrated, is a study formula. Of these formulae, I prefer the S4R over Q: Survey, Read, Rite, Recite, Review over Question. Over a semester or a year, the teacher can work with students to help them see that the study-to-learn approach versus the "start and read" method is not time-consuming. When students start to question as they survey, read, write, recite, and review, they become aware of greater concentration, less daydreaming, and fewer regressions in study. Systematic study such as this serves as a rationale in preparing for and taking examinations.

A study and work schedule proves to students that they can make the pressure of time work for them instead of against them. Regulating study has helped many students in that hateful transition between high school and college.

Efficient use of the library and some type of check-off sheet covering the various steps in doing term papers can be time-savers and curtail last-minute frustrations and afford time for a worthwhile finished report. Following self-established deadlines to space the work on a report, such as the preliminary search of the field, getting a title approved, completing all reading, doing the necessary outlines, drafts and bibliography allows time for other activities, planned or unexpected and personal or curricular.

Instruction and practice in effective listening has helped students to recognize and remove possible handicaps on their own in this facet of communication. They may have to compensate for a lecturer's shortcomings that deter attention; they can learn that prior outlining in a course may make difficult expository lectures more intelligible to them. If the average person's communication is spent 45 percent in listening, 30 percent in speaking, 16 percent in reading, and nine percent in writing, time for improving listening is well spent.

A companion to the art of listening in school is notetaking. Practice in this phase of education is not new, as it has been a part of many literature, social science, and science courses in high schools. But principles of notetaking should be taught, especially that the listener has the advantage of "thought speed" over "speech speed," giving him an opportunity to formulate and write a phrase or clause for later recall of the speaker's discussion.

These principles of effective study should be applied by the student under the teacher's guidance. Their application can help the student greatly to detour around the three roads to mental obsolescence. The obsolescence of forgetting, of ignorance, and of loss of ability to learn set in faster for many persons than do the automobile industry's obsolescence we hear so much about.

If a teacher is interested in helping his students but feels hampered, I suggest that he read **Self-Renewal, the Individual and the Innovative Society** by John Gardner, the Secretary of Health, Education, and Welfare. Mr. Gardner writes of "the courage to fail" and "mind-forged manacles." Bright students, many of them never having sensed failure, need to be encouraged to try the new and the difficult. Teachers having heard or accepted that something "can't be done" give up too easily in trying to vary their educational fare because of "mind-forged manacles," depriving gifted students of direction they need, and deserve.

So what is the compensation reaching our gifted students, not holding them back by insufficient guidance or condoning, or allowing them to be satisfied with, their doing less than their best?

Many superior students are not unlike Lionel, the twelve-year-old illiterate in William Saroyan's **The Human Comedy.** In the "pubalic liberry" Lionel gazed through his thick-lensed glasses at "green books, 'n' red books, 'n' blue books, 'n' brown books" on the shelves. "There's writin' in ever' one of them books," he said. "Gee, I wish I could read."

Although no Lionel, many a bright student has a similar desire. Lionel's was the wish for basic reading—the recognition of a word, the sheerest transfer of an idea from the printed page. The student we're talking about here today has those fundamentals. But he wants to be able to read in the fuller sense of broad interests, full understanding, critical reaction.

That he and all others of his potential that we deal with may develop that ability is my wish for all of us commissioned through our profession to that task. Fulfillment of the wish through good teaching can, in large measure be our compensation.

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# RECENT RESEARCH ON READING AND THE COMPREHENSION OF TIME-COMPRESSED SPEECH

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## Introduction

Much competent work has shown that it is possible to raise the rate and level of reading comprehension of average persons substantially. In recent years, attention has begun to be given to raising the rate and level of auditory comprehension as well.

In general people are conditioned to assimilate auditory material at normal speaking rates, i.e., about 100-150 words per minute. How much faster can they listen effectively? Physiologically the ear can discriminate speech sounds at many times this rate. Certainly the brain is capable of handling transactions at least twice as fast (as indicated by normal reading speeds).

Interest in listening comprehension is of course not new. Interest in the trainability of listening rate is perhaps more recent, but as far back as 1947, Nichols[1] posed the question, "Can listening rate, like reading rate, be increased through training?" Attempts to study rapid speed have invariably reported severe attenuation of comprehensibility with increased rates of presentation. Until recently such studies have used speeded-up tapes or records to increase speech rate and the resulting frequency shift has produced speech of higher and higher pitch. Many investigators concluded that loss of comprehension was as much due to frequency shift as to the acceleration of speech itself.

One investigator,[2] reasoned that since Miller and Licklider[3] had demonstrated that good intelligibility remained even after considerable loss of the stimulus word, it would be possible to physically cut out small segments of the speech record and play the remainder, thus compressing the total speech time, but leaving the original frequencies unaltered. Using discrete, spondaic words, Garvey found it possible to compress speech up to 2.5 times without losing more than 20 per cent intelligibility. He also studied errors and found that his relatively crude "chopping" had damaged only 20 of 422 basic speech sounds in the record.

Garvey's compression technique was far too cumbersome to be applied on any large scale. However, Fairbanks and his colleagues[4] developed an electronic device for doing esssentially what Garvey did by hand, with similarly encouraging results. More recently, Bixler, Foulke, et al.[5] began investigations of speech compression as an approach to teaching the blind again demonstrating the feasibility of the technique.

During the past three years under the sponsorship of the U. S. Office of Education, the author has conducted investigations at the American Institutes of Research inquiring into the ability of college students to understand tape recorded material at speeds greater than normal. This research has been made feasible by the use of a technique, similar to that developed by Fairbanks, which electronically removes small segments of the tape recorded speech sounds and abuts the remainder of the speech record together. Since the process removes only segments shorter than the shortest speech sounds, the result is relatively distortion-free; in addition pitch and intonation patterns remain normal.

Results to date have been very encouraging.[8] Up to about 300 words per minute, or about double the speed of ordinary speech, comprehension has been essentially normal. At higher speeds (rates as high as 475 wpm have been used) a significant loss in comprehension occurs, but this loss can be at least partially offset by practice listening. Several experiments have been devoted to an examination of the efficacy of different types of practice material, presenting all practice at high speed, introducing rest pauses every ten minutes during practice, and collapsing the schedule of practice into five consecutive ten hour days of concentrated listening. The best results were obtained by gradually increasing the rate of speed of the practice material during sessions lasting about one and one-half hours spread over four weeks. Other experiments have suggested that material learned via a time-compressed tape is retained as well as that learned at normal speed.

Over 100 students have acted as subjects and the major results have been confirmed several times. An additional result of considerable import is that by the end of the experimentation the vast majority of subjects have commented favorably on compressed speech and on its potential usefulness in the educational setting.

From the very beginning of our research it was felt that important links would be found between comprehension of time-compressed speech and reading variables. Unfortunately it has not yet been possible to pursue this line of research systematically. However, in the pilot study and pretesting phases of the listening studies, it became evident that exposure to time-compressed auditory material had a potential carry-over effect on reading rate. This raised the question as to whether or not auditory material, presented in rapid fashion, might systematically be employed as a reading improvement technique. A small pilot study was therefore set up and executed to explore this question. The results of this pilot study, which is described below, suggest that further research along these lines is warranted.

## Procedures

Ten males between the ages of 19 and 21, who were students at a college-preparatory school, were used as experimental subjects. All had completed high school. In addition, five male and two female control subjects of approximately the same age range and education were employed. All subjects had normal hearing and no marked regional accents. They were paid approximately $1.50 per hour. Experimental subjects were told that a $10.00 bonus would be paid to one subject on the basis of over-all performance.

Ten historical passages of 1,000-2,000 words each were selected which were thought to be of moderate interest and difficulty for these subjects. The passages were recorded at a normal speaking rate (175 wpm) by the same professional speaker and time-compressed to the following approximate rates of presentation (wpm) 225, 325, 375, 425, and 475. Multiple-choice questions were prepared for each passage taken from facts and implications in the passage.

The experiment proper consisted of simultaneous reading and listening to nine passages, compressed to 425 wpm, with the presentation of questions based on the passages immediately following each one. For each passage subjects were required to mark the position they had reached in the text at the end of the first minute. This served as an indication of the subjects' ability to read at a rate comparable to the auditory presentation of the passage. Passages were then repeated at 475 wpm (without questions) to provide additional practice.

In Session I, following completion of a Biographical Data Sheet, all subjects were given one form of the Nelson-Denny Reading Comprehension Test; the STEP Listening Comprehension Test, and one passage, compressed to 425 wpm, without text, followed by questions. Subjects then received two reading-listening passages. Five passages were presented in Session II the next week. In Session III, two days later, the remaining two practice passages were given along with the post-test administration of the alternate form of the Nelson-Denny and the STEP Listening test, and the high-speed base passage was repeated. Experimental subjects were required to return for a fourth session approximately ten days after Session III during which they were again tested on the form of the Nelson-Denny given to them in Session I. Approximately three weeks elapsed between the initial test and its repetition.

At their first session, control subjects were given a Biographical Data Sheet to complete, an audiometric screening test, and one form of the Nelson-Denny. They returned approximately ten days later (a time period equal to that the experimentals) for testing on an alternate form of the Nelson-Denny. Because data from a previous study had showed no significant change for control subjects, it was deemed unnecessary to test controls on the high-speed base passage, and the STEP Listening Test.

## Results and Discussion

### Pre-Test Versus Post-Test Performance

An examination of the before and after training mean difference in score on the high-speed base passage of 475 wpm showed a significant improvement for experimental subjects at the .01 level by a one-tailed test. This was in line with previous experimental results (Orr, Friedman and Williams, 1965). As in both previous and subsequent work, performance on the STEP Listening Test at normal speed showed no change. The failure of STEP Listening performance at normal speed to be affected by changes in performance on high-speed speech suggests that a different listening technique may be necessary for high-speed speech.

The most striking result of this pilot study was the large and unanimous increment in reading rate shown by the experimental subjects. The mean improvement for experimentals was 90 wpm (from 238 to 328 wpm) as compared to a mean increase of only 10 wpm for controls. The difference between experimental and control increment was significant at the one per cent level, one-tailed level, **and, thus is statistically reliable in spite of the small number of subjects.** The experimental increment represented an increase from the 45th to the 79th percentile on the Nelson-Denny norms for 13th graders. This result does not seem to be a simple function of motivation, as all subjects were urged to do well.

There was a mean increase, significant at the 5 per cent level, one-tailed, in vocabulary score for experimental subjects, but no change for controls. When corrected for chance, the results were substantially the same. The difference between experimental and control increment in vocabulary was significant at the 5 per cent level, one-tailed. The comprehension score showed no change either for experimentals or controls in the present study.

Thus, the results of the Nelson-Denny Reading Test in this study strongly suggest an increase in reading rate after training without either a gain or loss in comprehension. An examination of the last item attempted on the vocabulary section of the two forms for experimentals and controls shows a significant increase for the experimental group at the .05 level, but no significant change for the controls. However, last item attempted in the comprehension section showed no significant change for either experimentals or controls. It may be asked why, if experimentals are reading faster, no more items were attempted. It seems likely that the answer lies in the construction of the comprehension test which consists of long passages followed by a series of questions. Thus, an increase in reading rate may have increased the amount read and re-read, although the subjects attempted no more items.

### Performance During Training

It was predicted that subjects would be able to follow the text at the rate of speed at which the speech was presented. During each presentation of each passage, each subject was required to mark his position at the end of one minute. Of 172 (subject x passage) determinations there were only two instances in which the subject was at an incorrect place. It should be noted that this does not mean that the subjects' eyes merely moved along the page, since to maintain a correct position on the page, a coordination of recognized auditory and visual words **had** to be made. In addition, the evidence suggested that the forced expansion of subjects' reading rate in this study contributed to the maintenance of comprehension of speech at a rate beyond their initial reading rate.

One additional test was performed. Experimental subjects were asked to return for a rerun of their initial Nelson-Denny Test after approximately three weeks, and intervening training. Mean reading rate, which had increased from the 45th to the 79th percentile from the first to the second test, remained at the 79th percentile. Mean vocabulary score, which had risen from the 72nd to the 76th on the second test, increased to the 85th percentile the third time. Mean comprehension, which remained at the 59th percentile for both the first and second tests, rose to the 70th on the third. While taking into account the fact that this was a repeat of a test already given (in spite of the time lapse, and possible retroactive inhibition by other material), it may be said that these results are certainly not discouraging evidence of retention of the experimental effects.

## Conclusion

In conclusion, some comments on possible criticisms of this pilot study are in order. It is true that the reading rate measure used here has been criticized as a rather crude measure, but it was found to correlate highly (.84) by Blommers and Lindquist[7] with their much more elaborate measure of rate of reading comprehension. Undoubtedly it would also correlate quite well with the type of rate-of-comprehension score used by Flanagan[8] though comprehension per se is not the point at issue here. Further, as all subjects in this pilot study were paid and working for a bonus, it is unlikely that the simple instruction to do better (as reported by Laycock,[9]) would have had much effect in this instance. Finally, corrections for chance have been introduced, as suggested by Davis[10] to control for changes in test-taking sets as a result of the experimental procedures. (These corrections had little effect in this instance.)

Therefore it is felt that the results of this admittedly imperfect pilot study warrant attention and the further research necessary to confirm the findings. Studies are being considered to follow up not only the factors associated with comprehension of speeded speech (such as spacing of practice, effect of various types of material, retention of improvement, limits of speed for adequate comprehension, and so forth), but also the application of auditory pacing to the teaching of reading, the improvement of retarded and gifted readers, the teaching of foreign languages, and, finally, the study of the basic processes of reading and listening comprehension using speeded speech as a research tool.

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# MANAGEMENT OF VISUAL PROBLEMS AMONG POOR READERS AT COLLEGE LEVEL

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and
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The human organism attains college age by having processed developmental, nutritional, and educational experiences both internally and externally. He spends the first five to six years of his life getting ready to learn to read, the next five to six years of his life learning to read, so that he may spend the rest of his life reading to learn. Since reading and subsequent school progress depends enormously on the student's ability to get meaning from what he sees, the development of good visual abilities can mean the difference between learning success and failure.

The visual problem among poor readers on a college level must be viewed by the examiner from every aspect of possible visual ability or disability just as surely as if the problem had existed on a high school level. For in truth, the problem may have had its inception even in pre-school days.

Since vision is never so sophisticated that we can excuse the need for sound developmental progress, let us now take this presentation back in organismic time and stress the fact that the child can achieve scholastically when he is able to get meaning from the printed page and this can only come about when he is visually ready. His visual readiness is a product of experience and experience is essential to visual development. Vision is developed and learned, and developed abilities can be trained and improved.

From the very beginning of life meaningful vision is intimately related to the overall development of all other human functions. We are born with the necessary equipment but proper functioning depends on sound step-by-step learning of how to use the parts as an integrated "whole". Functional development cannot come about as a spontaneous outgrowth of maturational levels, but must be built upward from a solid foundation. Good sound body development is a necessary substructure for the development of the visual process, as well as all other sensory-motor processes.

The human infant builds gross movement patterns from undifferentiated gross movement activity. These gross motor patterns are developed in the two halves of the body. Through constant reciprocal interweaving within the control centers the child begins his

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development of a body scheme, thus learning a basic inner sense of his own symmetry or organization of his internal space. We may call this two-sidedness, bilaterality, keeping in mind that it is more than right vs. left, but also includes fore vs. aft, up vs. down, and so on. The projection of this internal bilaterality out into space is called directionality, and is the organization of external space. Having learned bilaterality, he organizes his learning so that he never becomes confused and now assigns leadership to one side. Hence we have the beginning of dominance within the body as one side leads and the other becomes the subdominant or supporting side.

As well-integrated gross motor patterns are refined, woven and interwoven, one side with the other, fine motor patterns are established. In early development, hand and mouth explore and manipulate (Tactual Stage). As fine motor patterns are laid down, hand movement leads eyes (Tactual-Visual Stage). With the increased use of a lead or dominant side and the increase of hand and eye activity, the foundation is laid for the establishing of a lead or dominant eye. As the child begins to explore space beyond his body limits, the eye will soon be leading hand (Visual-Tactual Stage). Thus from a stage of development where the consistency of visual data must be verified by mouth and hand to a stage where the child's environs become meaningful to him on a purely visual basis (Visual Stage), we see one of the most important sequences in the development of the human child.

As in the case in learning to integrate the movements of both halves of the body in first learning to creep in order to walk, so do we also have the need for learning to integrate and match the visual information from the two sides, since each eye is separated from the other, both anatomically and functionally.

With normal developmental progress, the child will reach the age when he is able to use adequately both eyes as a team in their movements through space. This learning of visual manipulation is under the control of the voluntary nervous system. However, Vision uniquely involves an identification process which comes under the control of the involuntary or autonomic nervous system. A learned relationship must be established between both nervous systems whereby we can immediately identify an object at the very instant that our eyes point to that object. Although the stage is set for the child to utilize two eyes together as a team, binocularity is not fully developed in all its refinements until the ages of 10 to 12, when the involuntarily controlled (visceral) factors of ocular performances have been integrated with the voluntarily controlled (skeletal) factors. The skeletal basis for binocularity (bi-ocularity) should be developed by the ages of 4 to 6. There are four stages in the development of biocularity:

**Stage 1.** Random limited movements of eyes with head movements used in support. This is the indeterminate stage.

**Stage 2.** Alternate monocular eye movements with less head movements and more ocular mobility. This is the right **or** left stage. During this stage we can observe the earliest eye and hand combinations as the right eye will follow the right hand and the left eye will follow the left hand.

**Stage 3.** Overlapping bilateral movements of the eyes with the assistance of the head to get the eye into the teaming act. This is the right **and** left stage.

**Stage 4.** The right-left stage in which we see the teaming of eyes in every movement. At this level the motor basis for binocularity is completed. Any interruption in the normal sequence, prior to completion of Stage 4, might result in strabismus or amblyopia.

The visceral (autonomic) components for binocularity follow a similar pattern of development. The visceral components must interact with the skeletal components to establish a functional unity (fully developed binocular teaming). Hence, we can begin to appreciate the complexity of the visual process and the enormous task of developing this truly remarkable avenue of getting information.

This brief resume of the development of parts into an integrated "whole" should be sufficient to deter any examiner from attempting to "dissect" and "isolate" parts; our concern must be the total operation of the total child. It must then follow that our concept of vision should be one which gives us a working model that would lend itself to better understand the problem of visual readiness for scholastic achievement, and lend itself to better enable us to assist the struggling youngster who so richly deserves the knowledge he is striving to attain.

Our model of vision must fundamentally illustrate a circuit through which we gather information, relay the data to headquarters and act on it. A search for meaning is initiated by the heliotropic or phototropic response of the retina to the light density gradients emanating from an object or a symbol in space. The alignment of eyes toward the object is accomplished much in the manner of bombsight functioning when the retina positions itself in order to equalize the distribution of light. Retina then acts as a transducer to transform light energy into "on or off" neural impulses. This electrical excitation at retina starts the flow of neurons along the visual circuit, but there can be no vision until the circuit is completed. This input from light is then matched, integrated, and synthesized with past or present inputs from other sense modalities. The matching triggers off a brain scanning to institute a search for meaning from our organized units of experience which represents our past learning in our storehouse of knowledge. This instigates activity along the common motor pathway, completing the circuit with an output. The entire circuiting must be completed and the two visual inputs (one from each retina) matched in 2/10ths of a second, hence there is no time for interference. If the units of experience cannot be organized in that amount of time, the student must go back and re-read; if he still cannot obtain the desired amount of meaning, he starts to cut down on the amount of reading and if he still cannot achieve the desired result, he begins to shy away from the task and eventually quits.

By recognizing the stages of development, our task is to guide the pre-school child through proper sequence. In the case of the school-age child where interference with that sequence has occurred, we must approach the problem by recapitulating the developmental sequence in our offices. This is done by instituting visual training procedures to take the youngster back in time, affording him the opportunity of establishing the necessary patterns in the proper sequence. Hence visual training is a means of arranging conditions for the child to learn. It is through this avenue that his ability to perform may be enhanced.

We have tried to show that vision is more than a sense of sight. It is not an entity in itself, but it is a sensory-motor process which emerges from the inter-action of the major sub-systems of the human organism. As previously shown, good vision depends in part on the efficient interplay between the voluntary nervous system and the involuntary nervous system. Vision is also dependent upon another major sub-system of the human organism; the vestibular or antigravity. Twenty percent of the fibers from each optic nerve go to posturing centers, rather than to the visual cortex. Thus functions of balance and kinesthesia are intimately related with the visual process. Hence, we can see that to deal with vision, we must deal with other sub-systems and to deal with other sub-systems, we must deal with vision. With this in mind, we can appreciate the rationale behind our vision approach to developmental and scholastic achievement problems.

The youngsters who have not developed the adequate motor patterns come to us labeled by their symptom of non-achievement, the lazy one; the one not working up to potential; the one who could do it if he tried; the one who has an emotional problem, and so on.

These youngsters show many variations of non-achievement, each a malfunction of the visual process. Five of the more basic variations of non-achieving students are (1) non-sustaining (2) sustaining; (3) non-sustaining with high auditory comprehension; (4) visually regressive (5) non-organized dominance. **None** of the preceding types of non-achievers are influenced by 20/20 acuity or the lack of it (except where near point stress has produced ocular changes due to adaptive variations of the visual mechanism—e.g. myopia, astigmatism, adverse high hyperopia) Typically these youngsters **do** have 20/20 acuity.

First, we have the non-achiever who is visually non-sustaining. This student characteristically is the high gross motor youngster who cannot sit still, talks all the time, disturbs the class, never finishes anything he starts and avoids all visually close centered tasks. This student does poorly from the first grade; never having developed the proper gross motor patterns as the foundation for proper fine motor patterns, (necessary for efficient handwriting, speech and near point visual coordination.) Characteristically, he has 20/20 sight and this provides a clue to his problem. He will save his 20/20 sight at all costs, avoiding visually close centered tasks at the expense of scholastic achievement. Paradoxically, the average girl conforms to near point demands. She will drive through her 20/20 sight, placing the visual mechanism under continued near point stress. She will attempt to achieve scholastically even at the risk of developing myopia or some other visual deviation.

The visual deviations present a true picture of adaption to near point visual stress and are usually accompanied by adverse postural changes. There are many non-sustaining students who have developed fairly good gross motor patterns, but have been unable to develop good fine motor patterns. They usually conform in classroom deportment but often lose touch with reality. Their daydreaming is another method of avoiding close, visually-centered activities.

Secondly, we have the non-achiever who is visually sustaining. This student will typically show a visual sensory-motor pattern (input-integration-output) of perfect textbook variety for far point functioning, but is grossly inadequate for near point functioning. He expends an enormous amount of energy in an effort to achieve, reading and re-reading, but his visual problem constantly interferes with his comprehension. His hours and hours of studying bring only disappointment and mediocre results. Youngsters of this type are usually the more serious ones driving themselves for scholastic recognition. They cannot understand why their classmates receive better grades with less time expended.

The third type of non-achiever is the visually non-sustaining student with high auditory comprehension. This is the high verbal student, doing well at first, who suddenly or gradually, but inevitably, drops from the top of his class even to the point of failing. With the help of superior intelligence and a superior auditory facility, these students do well until scholastic success depends more and more upon reading. They avoid reading because of their inability to attain, through vision, a highly integrated visual-comprehension level. Depending upon the individual student, these failures may occur in grammar school, high school or college. A case in point is a recent referral, a young man failing the first year of college after having been graduated from high school as Valedictorian.

Fourth, we have the non-achiever who is a visually-regressive student. This youngster's difficulty can be recognized by testing ocular-motor control and attention under specifically guided sensory-motor visual acts. These tests enable the examiner to determine when the patient is regressing visually. For example, a 13-year-old, eighth grader may operate at a visual level of thirteen with the initial introduction of the close, visual, near-centered task. However, as testing proceeds, it is observed that his visual performance deteriorates and his efficiency decreases. This down-grading chronologically duplicates the performance of lower levels; in extreme cases dropping to lower than a five-year-old level where head movements lead eye movements in order to achieve. In treating these cases, visual training must recapitulate the development from basic hand and eye coordination to the attainment of performance on a purely visual basis. With this enhancement of visual abilities, the student is better equipped to meet the demands of the school situation.

Fifth, we have the non-achieving student who has been unable to organize a dominant side. This type of problem manifests itself in a variety of behavior patterns. Reversals in reading or writing are prominent among these youngsters. Our analyses in these cases invariably indicate a lack of total organization between the two sides; good bilaterality has never been developed and dominance has never been established. Classically, little was done directly for reversing the reversals and they had been told that they would "out-grow it." The apparent truth of this in some cases can be appreciated readily when we realize that the reversal tendency is a symptom of a problem, not the problem itself. Since the problem is one of inadequate organization and development, the unfortunate harm that results is the delay in the individual's inner time schedule in building the foundation of skills necessary for good reading and efficient learning. Hence, even though the youngster may "outgrow" the reading reversals, he remains in trouble in the school situation. In treating this problem, we must recapitulate the proper motor development so that we can establish adequate visual function.

The student's lack of "power of concentration" or inability to sustain visually at the near centered task and the corresponding lack of scholastic success is our primary concern. Without the visual abilities to operate at the near point, to allow concentration and comprehension, the student will be unable to operate near his potential. It is through the area of visual training that we are able to assist the student in reaching the goals of education. Where one "tunes in" with corrective procedures depends upon the total developmental case analysis. It must, therefore, be understood that there is no "cookbook" recipe for the correction of these problems. Each must, of necessity, be treated on an individual basis in order to attain the greatest possible success from training.

In conclusion, we have attempted to show that the visual problem at the college reading level is generally no more than the product of earlier problems. But optometric management and training can assist the student to operate closer to his potential.

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# EVALUATING PROFESSIONAL COMPETENCY: THE ANAGNOLOGIST

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An examination of the numerous different instances of programs for the teaching of reading, the controversies generated in periodicals and books by well-intentioned individuals, the strong communication gaps between members of "professional organizations" associated with reading, the plethora of meaningless reading research studies, the procedures involved in the reading process, and the equivocal nature of the beast in question, indicates that few of the skills associated with teaching children to read are the peculiar responsibility or among the special and unusual competencies of a person whom we might identify as the skilled professional in reading instruction.

Indeed, the nature of the beast is such that we, ourselves, assume and promulgate that every teacher is a teacher of reading. We resent any less. Yet no body of information exists which justifies this view.

No research evidence exists which demonstrates a significant effect on either the teacher's behavior or on the student's performance as a result of such activity.

We recognize that highly effective reading instruction historically was and is presently generated by large groups of poorly educated people (the parents). We admit that "each one can teach one," that volunteer tutors are effective forces in improving reading skill, that ideas involved in teaching reading have often been generated by the unsophisticated and relatively uninformed, yet rail against the acceptance of the logical consequent that "everyone who has the basic patience and desire to teach another can be a teacher of reading."

To the observer, taking the position of standing off and viewing the scene with a hopefully unbiased eye, it would seem that there exists a group of people who have been given a quantitative training of an unknown quality which, through circumstances generated by a social emphasis, has led them to believe that they are markedly different from others in their ken. They feel threatened by the fact that so many others seem to be in a position to use those skills for which they have paid dearly in sweat, money and anxiety. They fear that their area of specialization is not being given the financial and status recognition that it so richly deserves. They fear that their area of specialization may come into disrepute since so many uninformed people are dealing with their specialty.

Leaving aside the rightness or wrongness of these views, let's focus attention on this field of competency. The reading specialist assumes he has a discipline but when examined that discipline is amorphous and hard to pin-point as uniquely his own. To structure the trappings of a discipline he has resorted to the use of a jargon which effectively screens from view that with which he works. Jargon, in itself, is not a discipline.

Judging by the emotional reaction with which each new idea about reading instruction is greeted by the so-called authority or specialist, no effective or reflective knowledge exists in the presumed discipline against which such divergent ideas are tasted and tested. Specifically, a poor knowledge of the history of the specialty is evident in these emotional pronouncements. Rather, they reflect a purse-string concern for continuing the status-quo. "Who knows better," we appear to ask ourselves as we look in the morning mirror, "how reading should be taught? After all I learned to read by the so and so procedure and look where I've gotten. All this jazz about such and such must, obviously, be wrong or at least nothing that should concern me. Let me only ignore it and it will go away."

The contrary view of this model, the view of the true professional would be summarized in an attitude of "I've got to know more about this. So and so back 140 years or so reported some interesting developments. I wonder how this idea is an improvement on that. I wonder if there's anything in the literature on this. This seems to have some interesting advantages which, if upheld, may make some of our current views obsolete. It looks like 'back to the old drawing board for me'."

Thus the examination may proceed and a summation of evidence may be given toward establishing professional competency. For purposes of clarity, however, it seems desirable to examine the assumed professionality against a professional model. For this purpose medicine is chosen. In medicine there is a hierarchy of skill, treatment, or knowledge. We have the home remedy, dispensed by the drugstores for aches and pains, ills and chills, boils and spoils. There is a bandaid medicine which the medical doctor encourages to eliminate the need for his being called on for bandaid therapy. Indeed, he appears to be superficially uninterested in this area of woe, yet offers much indirectly.

In anagnology,[1] there is a similar hierarchy. The anagnologist (a student of the art of reading) recognizes that there are areas of home concern, that we have home remedies, dispensed by the bookstore and mail order catalogues, for the phonics ills or drills needed by the child. There is an accepted bandaid anagnology which the anagnologist should encourage to eliminate the need for his being called on for bandaid-type initial reading instruction. The anagnologist might also indicate a superficial disinterest in this area of woe, yet offer much indirectly.

In medicine we have technicians who deal with some more special problems but we also have the practical nurse who operates very much like the teacher in the classroom. What are the special skills of this technician in anagnology, the classroom teacher? Her skills are little more than first remedies but they emphasize prevention of difficulty in reading and aim at the rapid development of the skills involved in reading. Her special knowledge involves the ability to teach the reading process and art of reading to groups of twenty to thirty-five who come to school wholly or partially uninstructed. Even here, however, the remedy (the instruction) is primarily of a cookbook-type with special attention to meeting individual needs in group situations.

Even the problem of the retarded reader is first a problem for the classroom teacher. The corrective case, more popularly described as the remedial reader, is simply a case of the child who needs small group instruction in the earliest years, as intensively as possible. No special skills are involved. Instead remediation revolves about a reorganization of time in the school curriculum to meet the needs of slower learning children. Again, first aid in this case is small group instruction, lessening the curriculum burden, and giving good instruction using a variety of devices from the patent-medicine shelves of the publishers.

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[1] The term was coined by the author in 1960 and is first used in public print here. From the Greek logos, the study of, and anagnosis, the art of reading.

In the case of the true remedial, the clinical case, the skilled nurse role of carrying out prescribed therapy has its counterpart in the reading specialist as we know him in most academic situations. The specialist, here, has additional skills and abilities in instruction and such instruction is seen as essentially on a one to one basis.

It is with such cases that the true professional, the practicing anagnologist, comes into view. He is the diagnostician who can analyze the needs and deficiencies of the seriously disabled. He, too, may provide instruction but more likely his role is to supervise such therapy as he may prescribe. He serves as consultant in anagnology to schools, to the teacher, to districts, and so on, and prescribes for and instructs teachers in appropriate remedies. He serves the larger role of diagnostician of the total school anagnology program and establishes the overall program. He may, however, be in private practice, in industry, and serve similarly. As such his skills are identical to the general anagnologist who is usually associated with university or college staffs and who has the primary responsibility for instructing teachers or developing specialists. This hierarchy can be extended to note the role of the experimental anagnologist (the student of research in reading) and the clinical anagnologist (comparable to the internist or surgeon) to whom the practicing anagnologist would defer.

In this view, only the anagnologist in his varied roles, is recognized as a true student of the art of reading. Lesser functionaries will have an interest and include studies of the art in their training but the anagnologist is the constant student of the art of reading.

Let us re-examine the anagnologist (the general or practicing anagnologist) in terms of his competency. We know he is a linguist but not necessarily a linguistic scholar. That is, he knows a phoneme when he hears one, recognizes gpes (grapheme-phoneme equivalents) and the morphemes of English. He has a knowledge of the history of the English language and its orthographic changes. He is aware of the historical influences on the spellings of English.

We expect him to be thoroughly aware of the history of reading instruction in general and American reading instruction in particular.

He ought to be aware of the philosophical, social and economic influences for the mastery and the improvement of reading skill, recognizing its early utilitarian values as opposed to modern emphases.

We expect him to be an expert on learning, learning theory, and the practical application thereof to the mastery of the reading process in English. He must be versed in the psychology of thinking, and cognizant of methodology in its development and challenge. We expect him to be thoroughly grounded in child development both in its physical and personality senses and aware of the child's changing attitudinal and interest biases. We expect him to synthesize a knowledge of physiology, neurology, perception, audition, and speech production for use in his diagnostician's role, be it for individual or school district problems.

He is an expert on evaluative devices, recognizing their inherent limitations as measuring devices, yet encouraging their valid limited use.

He is at the same time literate (in a literature sense) and a literary critic. He is a teacher, a man of patience having a desire to communicate ideas to others. He is a prodigious consumer of research, one who is dissatisfied with his limited knowledge. He is expert in his knowledge of the educational milieu wherein he practices or for whom his teacher-specialist products are destined.

In short, we expect no less than a man who is a student of all of those elements and factors which effect and affect the art of reading. Too few of us can measure up to this model. Yet any lesser model produces an incomplete and shallow figure.

Having ordered the word of anagnology, it is possible now to note that no specific concern about bandaid therapy need arise, that some concern for appropriate program approval for the teacher's additional skills and knowledges should be voiced, and that specific concern about the qualification of the specialist be established by anagnologists. The anagnologist, however, needs to be himself licensed. Professional association licensing on the basis of examinations and/or credentials become a realistic procedure.

The policing of advertising claiming superiority for one aspirin as opposed to another with buffered properties—one reading program as opposed to the same with color additives—would not properly be within the purview of that American Association of Anagnologists.

Results of the elimination of the headache (the minor instructional problem) is the concern of the remedy buyer prior to school or in school, not that of the anagnologist. When the anagnologist devises bandaid therapy or cookbook patent remedies for the bookseller's shelves, he should be expected to have subjected his remedy to the test of field use. And we should assume that his publisher will use those commerical devices necessary to produce acceptance by the buyer, and profits for the company and the author. The American Association of Anagnologists should sit in judgment to insure that no greater negative effect is produced by that remedy as opposed to the existing standard remedy, of course.

Thus we may proceed and thus we can evaluate professional competency, giving recognition where due, criticizing within the corpus, further strengthening and building a recognizable discipline.

## NEW INSIGHTS IN TEACHER EDUCATION RELATED TO ELEMENTARY SCHOOL LEARNING

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For many years it has seemed to me that we have not really done very well in training teachers. Whatever success there may have been is accidental and not very well supported by research. Everyone says that student teaching, or some form of an internship, is crucial. Yet the relationship of undergraduate students to children and to the substance of their college courses is very cloudy indeed. Do we really know if methods courses should precede, run simultaneously with, or succeed the student teaching experience? What kinds of relationships should be built between the methods courses, the seminars, their instructors, and the firing line of the classroom and its teacher? I have not been able to down the feeling that too often it is the blind leading the blind. This paper is an attempt to get a dialogue going about the training of teachers, particularly in relationship to the intern concept.

This audience knows, I suspect, that I am an unregenerate questioner of "establishment" in the field of reading. I beg leave to occupy a similar role of questioning the "establishment" in the field of teacher training. The appropriateness of this topic to this conference can be seen in that the ideas I wish to present were part of my classes in Language Arts and The Teaching of Reading.

The point of this paper is to underline that whatever is wrong with American education must in some part be laid at the door of college instruction. This is a conference geared for college teaching. What have we been doing wrong? Simply, we have been doing little right. It was John F. Kennedy who stated, "The men who question power contribute as much as the men who use power." Question we must. Rattle the corridors of tradition we must. Because if we do not, there are others already in the wings that will do it for us. If you have not read between the lines of the Higher Education Act of 1965, you should do so. The potential for dramatic change in college instruction is inherent therein. We must look much more closely at what we are doing.

First, in bridging the gap between the impact of college activity upon the curriculum of local school systems, the current intern processes, "Practicum" at the junior level to full blown "Student Teaching" at junior or senior level, need looking at. I would question general patterns of what is called "participation" and "observation." Not that I want them eliminated, as they are crucial, but that I want them sharpened, refined, and made very much more effective.

I would question most intern activity, if I may use that term inclusively for all of these student-with-children activities, from several points of view.

1. Most intern experiences, particularly student teaching, are the most anxiety producing activities that could possibly be devised. Everytime we subject such inexperienced people to observation and critique by their far more experienced supervisors we produce anxiety. Put another way, the worst thing we do to student teachers is to go and look at them. Is this essential? I don't think so and will present some alternatives in a moment.

2. Most resident cooperating teachers are either less than we would wish for as examples to set before our undergraduate trainees, or even if talented and masterly teachers, they are often not doing what we would wish them to do on any given day that we wish them to do it! If we ask for a "lesson" on this-or-that, we are subject, and rightly so, to criticism that children are the slaves of the college instructors. Should a laboratory teacher alter his program to fit the needs of college instruction? I don't think it is necessary. I submit that we can train teachers with the best and with the worst of teachers (with exception of truly sick personalities).

3. I question the broadside shot-gun approach of sending students into a classroom anywhere to "learn what teaching is like." What I am suggesting must originate in the college class, not in the schoolroom itself. I feel we will never have a frontier of anything

if we send our students to learn by sheer osmosis, what teaching is like. We need, in short, to structure in much more detail, what our students are to do. Yet we cannot undermine the confidence of the cooperating teacher. We cannot by-pass these teachers. We must work with them. We need to experiment on these points.

4. The development of loyalty of student teachers to the **College Philosophy**, not to the philosophy of the local cooperating teachers, is a source of anguish to many college supervisors. We do something to lose the sense of idealism that Sergeant Shriver has clearly demonstrated exists, in very large measure, at the undergraduate level. How sickened we are when a cooperating teacher convinces a student that what he is doing is better than what the student is being taught to do by their college instructors. Loyalty to forward looking educational philosophy is crucial if we are to provide the educational leadership that is preferred to publishing companies' salesmen.

The role of the college, I feel, is supposed to be on the frontier of learning theory and experiment. How can we expose, and, more important, give practice to our students on those future excellent teaching practices (We hope!!!), those advanced theoretical constructs without a setting to try them out in? It can be done, I am convinced but by hypothesis only. What I am proposing needs clearly designed research. Maybe Title V of the Higher Education Act might be helpful. We will see. But the point is that colleges **must** lead. To follow practicioners in the public schools is death to leaders at the college level. It will be death to education.

### Some Suggestions to Meet the Situation

May I now move into a description of some attempts I have been making to meet the problems of (1) anxiety of the student teacher, (2) the ability (high or not) of the resident cooperating teacher, (3) general observation without structure, and (4) developing the idealism and loyalty of students to a forward looking curriculum. I began these explorations at Penn State in 1960. I have continued and expanded them here at JCSC in the past two years. My drive to do so came from several aspects: (1) Too heavy teaching load, (2) a need to teach language arts and reading, and (3) a need to control training experiences within my methods courses, (4) a need to provide appreciated help to nearby schools, (5) plain curiosity about what could be done to teach methods by remote control. This is what I did.

When we fought a losing battle for a junior student teaching experience at Penn State we were able to add an extra 75 minute class period to the usual three period a week methods class. This fourth period was combined as a double period to make it possible for whatever intern type experience might be organized.

I went, personally, to administration, top and middle echelon, in the local schools, and asked if they would welcome my students, working in teams of 2 to 4 (they were largely inexperienced) teaching a class in creative writing. The principals and teachers were delighted. I further asked only for teachers who wished to volunteer. No one was to be required to accept my students. I described in detail the lesson as it moved from stage to stage. I kept no secret from administrators or teachers. Everyone knew what was to be done. Everyone could withdraw if they wished.

My students came back walking on pink clouds — in general, but not 100%, ecstatic, enthusiastic. Those not so successful, upon analysis, were grossly overexpectant of the children. Yet something happened to these college students. They exhibited a marked readiness to listen to teaching theory **that related to teaching children any kind of writing.** Should the reader wonder how I destroyed loyalties to basal readers during language arts (not reading) classes that excluded reading instruction from their syllabi — this was the way. I simply let my undergraduates discover that word analysis begins, develops and is learned in writing. This is something few "authorities" realize to this day. From this point I helped my students during the college class time to analyze the papers that they themselves brought back from these one-shot experiences. I taught them most of what they needed to know about word analysis, phonics, if you please, without reference to any commercial system. Their loyalties came from what their own eyes saw. Their loyalties were to the philosophy of my college course. I had control, and not through mandate, not even through eloquence, although I suppose that did enter in, but through their own experience with a certain activity.

As the terms rolled on, I had increasing numbers of classes volunteered to me. Teachers found their charges enthusiastic about this creative writing activity, a once a term event. One said "Those girls put us to shame"!!! Teachers were usually unthreatened, cooperative, delighted. If they weren't, they withdrew. But the proof was in the pudding. In a sparsely settled part of Pennsylvania I soon had far more offers than I could service. So it has proven here in Jersey City.

What was the key? I believe, and certainly this must be researched thoroughly, that children's ideas are the most powerful of self-educational forces. Any activity that is central to the heart of learning must include emotionally toned reactions of the learners.

A teacher can hardly get more personal than by creative writing.[1] Drill on the alphabet won't do. Drill on "look and see" won't do. Nothing will do unless it is indestructibly connected to children's deep feelings. The response of children develops the idealism in our college students, in the teachers of the children, and **mirabile dictu,** in my graduate classes, too. I did not; in fact, I could not, go and watch these students in action. Most of all **I did not need to watch them.** This leads me to a description of a refinement of this earlier simpler exploration to what I am now doing here at Jersey City.

### Observation of Students Unnecessary

Remember the need to reduce anxiety by letting the student work privately without observation. Remember that the active support and encouragement of the resident teacher was important even if they shrug, as they sometimes did "I don't know why you are doing what you do, but the children love it, go ahead." Remember the need to teach my students the frontier aspects of the language arts and reading. I want to move onward from traditional practice — particularly commercially induced tradition.

Here at JCSC, in the middle of a seriously disadvantaged, in every way you can think of, core city, the problems of teachers are sickeningly enormous. How did I proceed?

First I went to Mr. Charles Silver of P.S. 24, to whom I must give much credit, (as well as to Mrs. Molly Kalat of P.S. 15 to whom I went later.) I said, in effect, "I feel I can teach my college students so much more about phonics and spelling if they have a weekly session with a single pupil. Are you interested?" He was and wisely proceeded to ask teachers if they had any problems in this area. They did — and how! Soon my students each week, on one of their weekly class periods walked down street four blocks and set up shop with a single child. What did I tell the teachers? This is the exact memo sent to them, later reinforced by a brief presentation at a teachers' meeting:

Language Art Classes of
Dr. Jeannette Veatch
Winter 1964

Working with Single Children

Choose a child who needs help but would not present an insurmountable problem to an inexperienced person. This means almost any child needing help in spelling yet who is not **seriously** disturbed emotionally.

The following procedures will be followed:

1. Student will give diagnostic auditory test to find out what initial, final, and medial letters can be heard and identified by the child.
2. The student will work with child at level revealed by activities that:
   a. Increase childs ability to hear and identify.
   b. Use child's writing and/or dictation to explore further child's needs.
3. If possible, take child's own word list and/or class spelling list and improve child's study skills developed before.

In addition, I, by request, made a presentation at the teachers meeting to indicate that these assigned pupils needed help to get to the level of the speller or reader. So the bulk of my work with my college students in class was to improve basic skills so that pupils could move into work with the texts in their own classess. I am assuming that teachers are quite accepting of this as I had literally, for this new semester, twice as many children as I had students.

Once the selection of children was accomplished, I moved into another direction. I recalled the work of Daniel Prescott. In his work with teachers, you surely recall, he asked them to describe one child in detail, week in and week out, month in and month out. He never went to see that teacher work with that child. This, to me, was a major clue. Could I not teach everything in reading and writing I needed to teach through reports of what my college students **thought** they taught? Couldn't I depend upon their own perceptions?

So I began to develop a way of having my students tell me, in writing, what they thought they accomplished. I wish to share with you several of these papers. May I repeat that I was teaching Language Arts and Reading. In giving up one full class period a week in order for these students to be with these children, I felt that I taught more in two-thirds the time. This, of course, must be researched as there is nothing in the literature about the perceptions of student teachers. Why? I believe it was because I had these students behind a very wonderful eight ball—a child. They must produce. No one was breathing down their neck. No one was watching. They were seeking, hunting ways of breaking through the communication barriers to these children. Back in class they heard one or two of their peers became excited. The contagion spread. How far? This is hard to say. Judge for yourself from some of the reactions.

## A Beginning Lesson

Ruth
Girl
Age 9
Grade 3

I met Annette for the first time today. She is a friendly, charming little girl. When I asked her to show me around the school, our first stop was the girl's bathroom. I was very impressed, so she took me downstairs to see an even larger, more impressive girl's bathroom. We saw all the shops, play courts, and water fountains as well.

Annette talked while we toured the school. She told me she was 9 and that she had been left back one time because of something that had to do with not being in school when promotions were being given out. I realized that she felt badly about being in a lower grade. I told her that the same thing happened to many other children and that it wasn't really very important.

I told Annette I was learning to be a teacher, and asked her to help me learn how to be a good one. I asked if I could practice the things my teacher taught me with her. She said, "sure."

When we reached the auditorium, I asked Annette if she would write something for me. We sat down and she seemed anxious to begin. She asked me how to spell "do." I said what is the first sound you hear when you say the word. She answered, "d." I said add an "o" to it and you've got do. She then asked, "how do you write "d?" I wrote a line of very large letter "d's." I asked her to watch the way my pencil moved. As I wrote, I said, "start here on the left at the bottom of the line, half-way up the space curve, come back down and go way up again." I asked her to trace the letter I had written with her pencil. She did so and repeated the words I had used when I wrote them. Considering she didn't have the slightest idea of how to write the letter when we started, I do not think she did too badly on the attached paper.

Next she wanted to know how to write the word "know." Q.: What is the first sound you hear when you say the word? A.: "n." Q.: What other sound do you hear? A.: "i?" Q.: Do you know what letter in the alphabet sounds like "o?" A.: No. Q.: Do you think it could be "o"? A.: Yes. Q.: If you put a "g" in front of the "o", what word would that be? A.: "Go? Q.: And if you changed the "g" to an "s?" A.: So. Next, I tried to explain the two words, no and know. I said "no" means the word that says you don't want something and I shook my head. "If you put a "k" that you don't hear when you say the word, in front of "n" and "o" and a "w" that you don't hear either at the end of "n" and "o", you have the "know" that means something you think about. Q.: Which word do you want to use? A.: The one that says you're thinking.

I said she was doing just great.

It was very late now, so I did not go any further with the "ing" family of words. I will work on this next week. I spelled "truly" for her when she was unable to tell me the first sound she heard.

I intend to work on these things, as well as start work on initial sounds, next week.

### Insight Needed by College Student

Robert S.
Boy
2nd grade
8 Years Old

I found Alex to be very quiet and it took a while before he responded to my questions. So I took out a large pad and wrote him a note, "How are you today?" He wrote me an answer. This went on for a few minutes until I was sure he was ready to begin work.

I gave him the test on hearing (sounds of letters in initial, final and medial places in words). He had problems with the sounds of letters at the beginning of the word, but the ends of words were not so bad. For example:

| | | |
|---|---|---|
| Beginnings: | oven - e | juice - g |
| | chilly - g | reckon - r |
| Endings: | love - v | |
| | lip - p | |

I took out the pad again and wrote something that he had said earlier. But he didn't know what it said until I helped him sound out the words. Then he took the pad and wrote a story about his "bike." I used this word to teach him the letter "b" like this: What other words do you know that start like the word "bike?" He gave me "bed" and "book" and some others that were wrong.

### A Break Through

Georgine
Boy13
6th Grade

Dr. Veatch, today, I finally had the opportunity of seeing a downbeaten thirteen year old lad—6th grade.

Perhaps today, I broke through the hostile band of hatred or the self-defeatist attitude which my student seems to exhibit.

I brought in two non-basal readers to my student. "Sports. Sports Everywhere" by Frank Jupo and "The Fourth of July Story" by Alice Dalgliesh. I chose these two books because he told me he is interested in history and sports. I gave him the opportunity to select the book he wished to read. He chose the book "Sports." He read "Knights of the Sleigh." Charles' reading was far from satisfactory. While Charles was reading, I noticed he either failed to see the words, or just did not know them or he just refused to read them aloud. I questioned him about the skipping of words. He told me that he needs glasses. His mother is supposed to buy the glasses for him in the near future. Perhaps, the glasses will improve his reading a little. The words that he stumbled on he tried to syllabalize or find a common or small word within the word he was having difficulty with.

When I saw the reading was becoming too difficult and involved for him then I read the story to him. He commented that he enjoyed the story especially when I read it to him. We discussed the story.

His exciting words were navigation, radar, biology and bow and arrow.

From last week's lesson and test, I found out Charles does not recognize or cannot hear the sounds of words in their initial position. He has a great deal of trouble with the sound of c. I used Heilman Phonics in Perspective, page forty-five, in order to teach the initial sound of consonants. He recognized all the consonant sounds except for the sound of c. He was quite hesitant about the sound of ck. I worked with the sound of c for a while; I will continue to work with this particular sound next week. He has a short attention span; therefore, I continually shift my activities.

The next activity consisted of saying the alphabet. Dr. Veatch, his failure to say the alphabet had some type of effect on me, as a human being. This "kid" has been cheated or neglected. This "kid" needs help! After he said the alphabet, he realized that he failed to say them in the correct order. He turned to me and said, "Please help me learn the alphabet; I need help." With such a request, I said I would help him and we can both help each other.

## Unique Work With Specific Language Needs

Suzanne
Gustavo
Age 15
6th Grade

I met with Gustavo for the second time on March 7th. He seemed to be glad to see me as he had a big smile on his face. We exchanged greetings. The first thing we worked on were the alphabet cards. Since Gustavo is a non-English speaking boy, I wanted to find out if he knew the alphabet and I wanted to hear his pronunciations. He knew most of the alphabet but some of his pronunciations are not correct, such as c-cz, b for v, etc. He mixes these up with Spanish pronunciations. Those he did not know or could not pronounce correctly I pronounced for him and had him watch my mouth and facial expressions. He imitated me and repeated after me. If he was not sure he kept repeating it until it was right. He is a determined boy to learn the English language correctly.

The next thing we worked on was his workbook and vocabulary. I feel he is capable of reading normal books for his age and grade level. To please the teacher who kept popping in, we used the workbook and made the time useful.

It seems that Gustavo had practiced his short vowel words, because he wanted to read them to me. . . . He had trouble with short i, o, and u. So we drilled on the correct pronunciation of these vowels. Those words that he did not understand he looked up in his dictionary. I did my best to explain to him. 'At times I asked him how to say a certain word in Spanish and he told me. He smiled at me if I did it right. He has a tendency to put s on endings of double l. He tries to pluralize and I explain the difference between singular and plural. We got to the word bee-hive and he pronounced "veehibe." So I reminded him of the word "baby." He said "vavy" first. . . . I worked on the pronunciation of the letter "b" . . . I said "b-b-b-b-b-" and he looked at me and finally imitated me correctly. I used the word "baby" because he gave it to me earlier. He has two younger brothers and one is the baby. He loves him dearly.

When I got to "v" I was almost stuck until I thought of the word "wine" in Spanish. He said "vino-vino." Then I got him to apply it to the word "hive." Funny he can say the "v" in his name correctly. Now he can say "b" and "v" and he can recognize them.

### A Student Grows in Teaching

Barbara
Brian
Boy
4th Grade

Brian and I were lucky to have the use of an empty 5th grade classroom for an hour. He has a short attention span and this privacy enabled me to have better control of his attention and interests.

I continued working with the "s" sound. We played a word game where each of us pronounced a word. The object was for him to tell where the "s" was in the word—beginning, middle or end. As our list grew he became restless. I knew this because I gave him the word "raining" and he said "I think that has an "s" sound, too."

Until now Brian was sure of his answers. I wrote them on the board and he saw his mistake. I was satisfied because from our first lesson (the week before) he did remember some words that he gave me then. (N.B. key vocabulary words.)

I introduced the book "Something New at the Zoo" and he told me he couldn't read and would I allow him to look at the pictures first and then began to read with the first page. I broke "something" into two words, and he had some trouble. He had trouble with small words "me" and "in", but he knew them when I wrote them on the board. He said "The new book I really enjoyed because you helped me." He called the book "new" because he explained that it was something else besides his reader. He knew "zoo," "sunny" and "window" without any trouble, but stammered on "open" and "Alice."

## A Student Gropes and Succeeds

Jill
Gregory
Age 16
6th Grade

The conditions for teaching today were quite poor. We had two chairs out in the hall and no desks. Gregory seemed embarrassed, because there were children in the halls and he felt they were making fun of him. I tried to put him at ease by talking about anything and everything. The topic of "Saturday Night's Party" seemed to interest him the most. As he spoke, I wrote down his dictation. He then read it back to me. He had trouble with the words "did" and "with." Since "dance" was his favorite word, I told him to form his mouth as if to say "dance," but to say another word instead. He replied "dog, did, don't, desk and dishes." I was surprised to see that "did" was one of the words he listed. I wrote down all of his words and asked him to look and see if he could discover what was alike with all the words. He said, "They all begin with the letter "d." We then did a similar thing with "w" words. He gave me the following words: "want, went, wind, window, water and weather."

I then asked Gregory to write the alphabet for me. He got as far as "g", began to get mixed up and showed signs of tension. I told him that was enough, and took out index cards with the letters of the alphabet printed on them. He was able to name each letter for me, so he does recognize letters. I then mixed up the cards and asked him to arrange them in order for me. Again he was only successful up to the letter "g." I then printed an alphabet for him and asked him to copy it. To change the subject, I told him to be more careful when printing, i.e., to make his tall letters tall enough and the straight lines straight. HELP! Please? Do you think a telephone book (looking up people's names) might help?

Gregory then showed me his reader and quickly said, "I don't like it." When I asked him what type of book he does like he replied "No kind." I asked him if he would like to read the **Driver's Manual** together, so he could pass the test and drive. He seemed very pleased at this idea. So on this happy note, I left.

### Using a Book

Susan
Pat
Age 12

I haven't seen Pat in a little over a month. We talked a while about what he has been doing. I told him about my vacation and practicum.

I bought the book **Ride on the Wind**, a story about Charles Lindbergh. He read the first few pages and had no trouble with the words. The book is about a six grade level which Pat is. I was pleased that I was able to find a book, finally, that he understood enough (all) of the words to enjoy the story. He read the story slowly but he did comprehend the story. I asked Pat to pick out a part in the story he enjoyed most. He read it choppily. I asked him to tell me the story and then he read it a little better. I read it aloud for him and his expression improved even better.

I then asked him questions from Larrick Chapter 5.

1. When do you have the most fun at home? — **after school outside with friends.**
2. What person do you like to play with best of all? — **my cousin.**
3. At school whom do you like to work with? — **a friend, Joe.**
4. What do you like to play indoors? — **cards.**
5. What do you like to play outdoors? — **baseball.**
6. What is your favorite sport? — **football.**
7. What is your favorite hobby? — **build model planes.**
8. What is one thing you want to learn more about? — **reading.**
9. What's one thing you want to learn to make? — **make a dog out of wood.**
10. If you could do anything you please next Saturday, what would you do? — **no answer.**

The final triumph for us all was the following poem sent to one student through the U. S. Mails:

### My Step Teacher

I have a step teacher,
All stunning and gay,
She teaches me how to read
And sometimes play.

She's very, very, nice,
She's very, very well,
She askes me questions,
And jokes she tell's.

I like her very well,
I hope she like's me,
If she does not like me,
I'll ture into a seed.

She comes and visites me on Tuesday,
All winter long,
Seeing Miss. Rappaport,
Is like a song.
by, your student Anthony.

On the back:

I no it dosent sound right, but I doun the best I could. Maybe you will not belive this poem, but I did right it my self. I guess this is all I have to say. I hope you like it. P.S.

Tell hello to your teacher.

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# THE PLACE OF SPEED READING IN HIGH SCHOOL AND COLLEGE READING PROGRAMS

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It is possible that high school and college reading teachers would look more favorably on the direct teaching of speed reading if certain conditions were met. Such an instructional procedure might be widely used, provided:

1) it could be taught quickly and simply.
2) it required no reading instruments.
3) it required no specialized workbooks, exercises, or drill materials.
4) it would neither confuse the learner nor inhibit comprehension.
5) it would not beguile the student into reading at an artificially induced pace inappropriate to the material.
6) it would help to discover an individual optimum rate for each reading task.
7) it would transfer readily to other subject areas.
8) it would allow home practice without special equipment, special reading materials, or timing device.
9) it would foster relaxation rather than tension.
10) it would give insight into the mechanics of rate improvement.
11) it would prove valuable as a study procedure.
12) it would initially screen out those students less likely to benefit from practicing it.

In the opinion of this writer the procedure called visual-vertical skimming appears to satisfy many if not most of the foregoing conditions. At the very least it offers some interesting hypotheses in need of experimental verification.

**What is visual-vertical skimming?** It is a process of moving through reading material so fast as to abandon left-right eye movements—hence vertical, and so fast that the usual auditory reinforcement of subvocalization is partly lacking—hence more visual than visual-auditory involvement.

**How is it unlike conventional skimming?** Most overview-type skimming is a process of attending to certain stimuli and disregarding others. Hill calls this process "selective skimming."[1] Smith urges the reader who is skimming to "cultivate the habit of skipping large sections of content."[2] The part not skipped is read at a conventional rate. In contrast, v-v skimming is moving more or less vertically down through the reading material giving equal attention to everything, then stopping for the act of self-recitation or recapitulation. It is a processing of visual stimuli after the exposure.

The act of reflection transpires after the skimming rather than during it. With practice the reader is likely to find that his eyes work better than his mind. As Stevens puts it, "perception outruns cognition."[3] With repeated practice both eye and mind should improve in ability to handle increasing amounts of material at high speeds.

Hypotheses concerning v-v skimming warranting investigation:

**Can be self-taught.** Start with easy novels, wherein comprehension problems are minimal or non-existent. Move through the material at a rate of two or three thousand w.d.p.m. (words dealt with per minute).[4] Then go back and repeat at decreasing rates until the major plot line becomes clear. At this point start over and read in the traditional manner. When this technique is mastered, move to newspaper and magazine articles, and then to text materials.

**Will not lower comprehension.** Consider this a pre-reading and post-reading technique, not a reading technique. Preview will enhance comprehension; review will enhance recall.

**Is self-selecting.** Persons with reading difficulties, and some skilled conventional readers, reject this approach. Other able readers report that they feel able to move to new levels of reading achievement after several practice sessions.

**Utilizes important adjuncts to rate improvement.** One of these is **rhythm.** It takes a very long selection and very high speeds to internalize this quality. Another is **warmup.** It takes initially ten or fifteen minutes of such pacing to perform at maximum capacity. A third is **conditioning.** One must keep in training by daily practice. If one skips this high-speed pacing for a week, the ability to perform is considerably weakened: several days of protracted warmup are needed to get back in condition. If one stays in condition, a minimal warmup is required.

**Requires no specialized material.** After initial period with easy novels, any material will serve. Try the newspaper and popular magazines. With increasing skill, use more difficult material.

**Fosters relaxation in reading.** If tension and efforts are present, practice should be stopped as of little value.

**Skill will transfer.** After warmup on one type of material, one is ready to read another type with heightened ability. A very brief (two or three minute) orientation to new page size and type size is indicated.

**Has study skills implications.** Use as the final step in survey. Many readers fall into the habit of going through the study material repeatedly, each time for a different specialized study purpose. Ability to break down the study process into separate components has value.

**Fosters recall.** Use as review of material read previously. As a self-recitation step, attention is centered upon recall by association. Various types of formal and informal recall devices or patterns quickly suggest themselves.

**Is flexible.** The reader is helped to settle on that rate (for the actual reading) which is optimum in terms of his own abilities and the nature and level of the material.

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